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Address.

THE TREND OF GYNECOLOGIC WORK TO-DAY.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN, AT THE FIFTY-FOURTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT NEW ORLEANS, MAY 5-8, 1903.

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NEW YORK.

An honor unsolicited extended to a member of this body should certainly be most highly appreciated, and I wish to express my most sincere gratitude to you for the honor of being chosen to preside at this meeting, an honor which I never for a moment even dreamed would fall to my lot. And if, as I proceed in the discharge of my duties, you are made painfully aware of my incompetency to occupy such a position; if you murmur regrets for your act of last year in electing me to this honorable position, I shall feel that it is but just.

I will be candid in saying that when in the small hours of the morning, nearly a year ago, I received a telegram announcing my election, accompanied by congratulations, my pleasure was marred by a feeling of regret, for I had promised to attend the meeting at Madrid, and I knew that it would be impossible, unless I deserted my post and confrères here. But, having the interest of our national body at heart, and unsolicited being one of its officers for the present year, I forwarded an apology to the committee at Madrid for my absence, and put my longings for the ocean aside. Why? Because I instantly realized that a visit to this ancient and delightful city of the south would be attended with equal pleasure and profit; and I am sure that ere this meeting adjourns my prophecy will be fulfilled.

Therefore, anticipating pleasure for you all for the next few days, I know that you will indulge me, if I inflict on you for a short space of time the necessity of listening to a review of what is already ancient literature in gynecology and obstetrics.

If I at the close of my remarks look wise and offer you advice for the future, be it ever so erratic, which is the customary duty and privilege of your chairman, you will realize that I am only following in the footsteps of my predecessors. But, instead of trying to interest you with ancient literature and paint glowing pictures for you for the future, I prefer to tell you of what I have accomplished in the past year in my effort to place before you at this meeting a just and unbiased expression of the best men in the country (whose lives have been devoted to our chosen specialties) concerning the trend of gynecologic work to-day, which, I am sure you will agree with me when I am finished, shows a marked tendency toward conservatism rather than radicalism in operative work.

A quarter of a century ago, he who would have advocated conservative surgery on the uterine appendages of woman would have been considered by the profession at large, the world over, a fit subject for an asylum.

How the lapse of time, study and experience has changed every feature of this picture of the past, until at the present time he who would cling to the traditions of that period would be looked on as antiquated even in his youth. The necessary courage required by the operator of a quarter of a century ago to withstand public opinion against his invasion of the abdominal cavity of woman, would be looked on at the present time, even by laymen, as an evidence of cowardice or ignorance on the part of even the family physician, if he hesitated for a moment to advise that his patient, be it child or aged person, should receive the necessary and expected relief attendant on prompt invasion of the abdominal cavity for pathologic changes from whatever cause, and to the average physician or surgeon so easily demonstrable at the present time.

What a panorama a review of the past quarter of a century presents to those who are familiar with these changes. The names of the star actors in this domestic drama—in which tragedy has played no little part—are already recorded in history as masters of their art and profession. But, even though nothing shall be taken from them, to their students, their national professional heirs, must be given the credit of at least making the effort of rescuing womankind from the ravages of an enthusiastic aspirant for surgical honors, who could only see radical removal of all in his path as his license to success. What a parody! How many thousands of suffering, misguided women have offered up their pelvic organs as a sacrifice, for the simple promise from such an ambitious aspirant for professional preference, that such sacrifice would immune them from all future unpleasant conditions peculiar to their sex. And how bitterly have these poor misguided women regretted in the years that followed their misplaced confidence so generously bestowed, when the knowledge was forced on them by sad experience that they had changed one condition of suffering for another equally as disagreeable.

But such is life in all things experimental, and our profession has never been an exception to the rule. These sacrifices, so far offered up by woman to her suffering kind, are bearing fruit for good, as I shall hope to demonstrate with the consensus of opinion expressed by the leading operators of the United States. You, gentlemen, are as familiar with the history of the evolution of gynecology and abdominal surgery during the past quarter of a century as I am. It is, therefore, un-

necessary for me to do more than call your attention to the names of those who have been pioneers in this process of transition from sacrifice to conservatism.

During this period electricity played a prominent rôle in an effort to conserve the pelvic organs, and was championed by Apostoli of France, and Cutter of New York; but this method of treatment was of short duration, and passed rapidly into oblivion, while conservatism of whatever nature was for a time lost sight of, in the smoke of battle, fought out between members of our profession as to whether it should be complete hysterectomy or suprapubic; whether it should be abdominal or vaginal, or the combined method. These men were so anxious to work and had struggled so energetically with every phase of the argument that they forgot apparently that woman in the future might return and demand something more. It was not until the nerve specialists called attention to the fact that we were sowing the wind and reaping the whirlwind for these poor women, that many of us realized what we were doing—prematurely endowing them with hot flashes, the rapid taking on of fat, the loss of their generative function and regrets for their unsexing.

To Robert Battey of Georgia and his followers in this country; to Lawson Tait and his followers in England, and to the many German and French operators, whom it has been our pleasure to know and respect, should the credit be given.

It was my privilege to see Sir Spencer Wells do his twelve hundredth abdominal section in the Women's Hospital of New York in 1881 or 1882. The technic of that operation was the forerunner of the coming of Lister. With the advent of the latter, the Mephistopheles of surgery vanished from view. Fear no longer haunted the mind of operator or patient, and the peritoneum, the bugbear of former years, seemed to readily acquiesce in the evolution. With this confidence in the restorative powers of human nature came the reckless disregard of the consequences in the future. And she who dared to complain of symptoms referable to her pelvis, be they minor or major, which rendered her more or less an invalid, was at once condemned to the operating table, and the sentence—ablation of her pelvic organs—immediately carried into execution. Ere by delay in many cases (from my standpoint of view, be it honestly stated) the patient might recover from her fright and change her mind before the dawn of another day.

During this time, covering a period of about twelve years, woman, the unprotected, has been the victim of professional opinion, and God knows she has paid the penalty. But when they had returned in an unlimited number to the shrine at which they had formerly worshipped with every conceivable form of discontent and domestic unhappiness as the only fulfilled promise of absolution from their former disabilities, given to them under a solemn promise, the eyes of the profession (who claim the honor of practicing our specialty) opened wide with astonishment, coupled with regret (in the heart of every honest man) who saw by after-experience that his promise had reacted to his own discomfiture. The dire consequences of this wholesale ablation of the generative organs of woman and the apparently sympathetic tolerance evidenced by the peritoneum led the writer of this paper, in 1887, to begin a series of experimental operations on the uterine appendages, which, strictly speaking, was more radical than a hysterectomy, because it trusted such surgical work on the appendages to the efforts of nature for a cure, while the ultimate results were more conservative to the woman, because by the skill of the surgeon and the aid of nature she had been restored to health, and could still consider herself a woman.

I do not claim to be the first to have performed conservative surgery on the ovaries of woman. I desire to give full credit in this report to every man, and his work, from whom it has been my privilege to glean. From their writings, and knowledge in reference to this matter, and in so far as I have been able to discover, I give to Carl Schroder the honor of being the first to practice and publish conservative surgery on the uterine appendages, who, in 1885, published the report of five cases, the after-results of which are not known to us in America.

It was in 1887 that I published the result of my first case, which was followed by pregnancy in three months, and, from fear of a return of her former trouble, a criminal abortion resulted. In 1889, August Martin of Greifswald published ten cases; in 1891, eleven more, and in 1893, six additional. One of the 27 cases died; 24 cases were observed for a prolonged period. Of these, two had recurrent disease, and eight became pregnant. Among 41 salpingectomies reported by Martin, only one became pregnant; a point which I desire to emphasize thus early in this report, with reference to the much more frequent occurrence of pregnancy, providing the tube is not mutilated.

You will readily understand, and I think the conclusions you may be able to draw from the summing up of this report will be evidence sufficient that I am not finding fault with the past, and the brilliant work that has been accomplished, but rather that I am looking to the future, and hoping that progress will be made in the direction that I have chosen to believe it will be in the next decade.

I am not, of course, as familiar with the work of my confrères in Europe as I am with those I am in touch with in my own country, but those I have come in contact with, during my sojourns in various parts of the old country, prove to me that our confrères abroad get up very early in the morning. Von Winckel, Hofmeier, Schatz, Zweifel and P. Muller approved this method of procedure as early as 1893. In the same year Pozzi published twelve cases. Hegar, Leopold and Fritsch opposed it, but I am sure if they are not already converts to conservatism rather than radicalism, they will give the subject serious thought, for they are wise and fair-minded men.

From 1887 the work of reform, so to speak, began in an active manner, and hysterectomy "from whatever excuse could be plausibly given," received and felt the desire among certain members of the profession to break away from the cold-blooded method of ablation of the woman's pelvic organs, and if possible seek a higher sphere of work in her behalf—that of checking disease, which would ultimately result in her unsexing, and by skill and careful treatment secure the restoration to her (with an ability to perform their functions) her pelvic organs that had been so ruthlessly sacrificed in the past. This seemed to be a world-wide desire, for the work was simultaneously undertaken in this country and abroad. But little attention was paid to it by the profession at large until 1891, when Polk in his masterly address before the American Congress of Physicians and Surgeons, held in Washington, championed the preservation rather than the sacrifice of woman's pelvic organs, if by skill, perseverance and courageous surgery this could be accomplished in the future.

In very many of the cases we meet with it is necessary to do triple operations on the genital tract, such as curettage, trachelorrhaphy and perineorrhaphy before it would be justifiable to attempt conservative work on the appendages, with any prospect of a cure, or even the prevention of a return of the pelvic trouble. Even then the pelvic work must in many cases be accompanied by uterine and ovarian suspension in order that the function of menstruation should not be interfered with, or the possibility of pregnancy removed.

Dr. S. C. Gordon of Portland, Me., reports two cases where complete oöphorectomy was performed and within three years each patient became pregnant and went through full time and delivered a well-developed child. Of course, some very small portion of one or both ovaries was left, and perhaps included in the ligatures. Catgut was used, and to this may be due the result, inasmuch as the tube may have become patent after absorption of the ligature. He has used only catgut for ligatures or sutures since 1884. In another case he removed one ovary, resected the other, did a ventrosuspension, and after a lapse of two years the woman conceived and bore a child at full time. In several other cases puncture of one or both ovaries has been done with relief to the most obstinate and troublesome symptoms.

This method of procedure was not resorted to by the older operators. That was before the days of antisepsis and the mortality rate for even simple ovarian tumors ran high, so much so that we members of the house staff would lay wagers with one another as to how long a patient would live after such an operation.

Mark the difference in my own experience in a lapse of five years from that time (1882). A patient with pelvic disease which indicated operative procedure came to me for relief, but begged that I would not remove her tubes and ovaries. I opened her abdomen, broke up the adhesions in the pelvis, split her ovaries in half, took out portions of them that were diseased, slit up the tubes, washed them out, put them back, and closed the abdominal wound. This patient was relieved of her symptoms and retained her normal functions. Three months later she conceived. However, she was so afraid that pregnancy and labor would undo the good work I had done for her that she had an abortion performed. Then she conceived a second time. Since then I have continued to do conservative work on the tubes and ovaries. My work in this direction has differed somewhat from the work of other men, in that I have not tried to save everything, but I have tried to save what I thought would perform its function normally. In all I have operated on 269 cases in this way, and without a death, until Christmas week of December, 1902, when I promptly lost two from violent general septic peritonitis, introduced into the women's abdominal cavity by the hands of a septic house surgeon who unconsciously infected a number of others in the hospital for other operators at the same time.

In doing conservative surgery on the tubes and ovaries the first thing to do is to endeavor to put the inside of the uterus into a condition to become healthy. If plastic work on the genital canal is necessary, this must be done also. Then open the abdomen and do what work is indicated in each individual case.

In deciding what to do, the age of the patient is an important factor, as is also her social position. The domestic relations of the woman should also be considered. The after-effects of radical work and the dangers to which the patient is to be subjected should also carry weight. These five cardinal points should always be borne in mind. If the patient is a girl, anemic, with cystic ovaries and displaced uterus, whose future is just beginning, you would not like to unsex her if you could save her appendages. Dr. William D. Howard of Baltimore, one of the nestors of gynecologic surgery in our country long years ago, opposed such work, and cites many cases where his opinion was substantiated. He is still to the fore at the age of 82.

Then her social position. If the patient is a hard-working woman whose life is one of toil and who possibly would not be benefited by conservative work, you would not want to subject her to the hardship of a possible necessary secondary operation. If she is a society woman, floating about half the day and half the night, and neurotic because of her dissipations, I should not so regret it if I did unsex her. If the domestic relations of the patient were such that a radical operation would give an excuse to her husband to run around after half a dozen more, I would rather not give him the excuse. Then, again, if the work I should like to do would necessitate a prolonged anesthesia and the woman not able to stand it, I would prefer to do any operation that would not take so much time.

If the patient is over 40 years of age, I would not be so anxious to do conservative work, although Kelly goes so far as to advocate the removal of fibroid tumors from the uterus of a woman who has passed the menopause by a number of years. I deem it advisable to do your plastic work first, unless you have to do a good deal in the pelvis that may make peritoneal drainage necessary, in which case it is better to make two distinct operations, at different sittings.

I do not hesitate to remove small fibroids from the uterus. I have removed as many as sixteen from one woman and left her appendages. I would not hesitate to open up a hydrosalpinx, wash out the tube and drop it back. I would not hesitate to open up a hematosalpinx, providing the tube was patent at the uterine end. If the tube is occluded at the uterine end, and if it was not the result of sepsis from abortion or gonorrhea, I would not hesitate to open it and wash it out. If I found an ovary with a cyst, no matter what size, I would not hesitate to remove it and leave what healthy tissue I could find. There is one condition that may exist within the woman's pelvis, however, that requires the most radical and careful treatment, and that is dermoid cyst of the ovary—the most deadly thing in a woman's pelvis. Therefore, let me entreat you, when you get a case of dermoid cyst, not to let one drop of its contents touch the other pelvic organs.

If it be the question of an heir to inherit a large property, or if husband and wife were very anxious for offspring, I would do any amount of conservative surgery compatible with their wishes and safety.

Professor Polk and myself have discussed this subject thoroughly. We would open the abdomen of any woman to make sure of the cause of sterility, if this be requested, and that is not the least of the conditions for which I would operate. I would go still further and say that if there were certain forms of pyosalpinx which are non-septic, in which the tube has not been destroyed, but is patent, I would wash out the tube and try to save it, provided it was not of recent date. (See cases of pyosalpinx in table of various operations.)

Individual judgment must decide whether or not an ovary or tube can be saved. (See consensus of opinion of operators.) After resecting whatever portion of the ovary is necessary, I close the ovarian wound with fine

silk, the ordinary floss silk No. 00, such as is sold by the dry-goods stores. I never use catgut for this purpose, because I can not be positive that catgut is absolutely aseptic, and I have no wish to introduce sepsis with my suture material. Moreover, catgut that would last twelve days in the tissues, the time necessary for healing, would oblige me to use a very large size and a very large needle, and the result would be troublesome oozing from the needle punctures. Therefore, I use a very fine silk and cambric needle, and carefully approximate the parts. The silk will last as long as you want it to. Two years ago there came into the hospital a woman with a retrodisplaced, bound-down uterus. The tubes were also bound down. At her request I did not remove the appendages, although the condition was not as good as in many other cases. I broke up the adhesions, resected a half of each ovary and tube, and did a ventrosuspension. The woman recovered perfectly. She came occasionally to the clinic, as requested for observation, and one day a very large speculum in the hands of a student caused her much pain. At that time she was a few days passed her period and she at once began to bleed. We operated on her expecting to find an ectopic gestation, but instead I found a blood-vessel in the broad ligament had been ruptured and there was a large hematoma. At the second operation I found that the silk which I had used at the first operation, four and a half months previous, which was a twisted Japanese silk, although fine, was still unabsorbed at the tip of the tube. A year ago the woman again presented herself, seven and a half months pregnant. In this case only one-half of one tube and one-half of one ovary had been saved.

The surgeon who now does radical work in all cases, and I mean by that removal of organs that could possibly be saved to the woman, is open to the criticism of not being a conscientious man. He may be looked on as not even a good mechanic, for skilful men are now doing myomectomy for fibroid tumor in suitable cases with conservatism as their goal, and a large number of pregnancies have followed their work, whereas but a short time ago complete hysterectomy seemed to be their only recourse. Of the 269 patients from whom I have removed portions of tubes and ovaries, coupled with various forms of plastic operations, including ventrosuspension and ovarian suspension, I have so far been able to trace 43 pregnancies, 35 going to full term and 8 abortions. Many of the 269 cases have, of course, been lost sight of, as is inevitable in hospital practice.

Now, take, for instance, a case of salpingitis pure and simple. The fibriated extremity is closed, dilated and club-shaped. The tip should be opened with scissors and the contents evacuated. It should then be washed out. If the tube contains pus it is best to wash it out before probing, in order that we may not carry septic material further into the tube. The tube should be aspirated, then washed out with one of these four solutions: (1) Normal salt solution; (2) 20 per cent. carbolic acid; (3) 1/5,000 bichlorid; or (4) a very weak solution of permanganate of potassium. After this is done, open and probe the tube. Catch up the tube and straighten it out, bearing in mind the direction of the uterine portion. Introduce the probe gently, and if it passes into the uterus, we will know that the tube is patent. Then, if the tube has not already been washed out, this is done. If the uterus has not been packed previously, it will be noted that some of the irrigating solution will be noticed in the vagina. If so, what excuse have we for removing the tube? None. Our aim is to keep that tube open so it will not close again; therefore, you do a phimosis operation on the end of the tube. Split up the dilated portion and roll it out. Then with fine silk and cambric needle, with over-and-over stitch, you go all around the tip of the tube, until you come to the place you started from, the probe being still in position. The fimbriæ have been used up and absorbed and you have got to have something to aid the passage of the ova into the uterus. The canal of the tube is lined with ciliated epithelium. These cilia are constantly waving back and forth and it is this wave-like motion which carries the ovum into the uterus.

In hematosalpinx (dilatation of the tube with blood), the same condition exists, except that instead of being filled with serum or seropus, the tube contains blood that should have been carried off through the uterus at the menstrual period. It is usually due to displacement or twisting of the tube causing a damming up of the blood. This condition is not septic and tubes thus affected can be saved. As the condition is usually due to displacement of the uterus, this must be remedied. The adhesions must be broken up and the uterus replaced and kept in position by ventrosuspension and the tube treated in the same manner as for salpingitis.

Hydrosalpinx, a dropsical condition of the tube, due to repeated congestion and arrested drainage from any cause, is usually the result of displacement of the uterus. It should be treated as a salpingitis and hematosalpinx.

In all these cases it is necessary to have a full history in order to determine the different varieties of tubal disease. A history of gonorrhea, or abortion, or puerperal infection will at once put us on our guard, for in such cases the affection is usually septic. One word in regard to pus: It is well to remember that non-septic pus, formerly called "laudable pus," is free from odor, while septic pus is very foul. If the pus of pyosalpinx is septic, beware of it. In 95 out of 100 cases occlusion of the tube is present after septic abortion. In the other cases the pus will flow into the uterus. The latter cases are favorable. In all pyosalpinx cases the field of operation must be carefully protected with gauze packing in order to prevent peritoneal infection, be the method used abdominal or vaginal. It is well to have at hand a large hypodermic syringe or an aspirator and to tap the pyosalpinx before you open the tube, in order to ascertain the character of the pus. If septic, inject the tube with a 1/1,000 bichlorid solution and withdraw the fluid, repeating this procedure a number of times, in this way avoiding possible infection of the surrounding parts by evacuating the contents before splitting up the end of the tube. If it is difficult to get the tube into view we must place the patient in the Trendelenburg posture so that we can see the tube *in situ*. After we have made sure that the tube is patent, we need not hesitate to drop it back into the peritoneal cavity. If it is not septic, the peritoneum will take care of it. Moderate oozing will also be taken care of by the peritoneum, but we must guard against any distinctly bleeding point at the end of the tube.

Now, respecting complications and after-treatment of these cases. One complication is fibroids, small or large. If possible, myomectomy should be done. In doing this one point is to be remembered; we must not take the fibroid off too close to the uterus, for in that case we will leave a gaping wound. Enucleate the tumor in such a way as to leave sufficient peritoneal covering to be able to close the wound without traction. Split the capsule and take the fibroid out and remove the tumor by morcellement if necessary. Then with catgut No. 1,

chromic—I do not use silk in the fundus, because the uterine tissue will contract and leave the sutures loose—bring the flaps of peritoneum together with a continuous suture. Good drainage is essential in these cases. If the fibroid is buried deep in the uterine tissue, it is well to make an opening into the uterine cavity to provide for drainage. This will guard against a collection of blood or pus within the muscular structure of the womb. Two or more rows of sutures are sometimes necessary to close the uterine wound left by the removal of a fibroid. If there are several fibroids, never mind how small, repeat the procedure, removing all. Cul-de-sac drainage is sometimes necessary.

In order to hold the uterus up in these cases, I do ventrosuspension by means of two salmon-gut sutures inserted through the fundus and abdominal wall, and leave them there three weeks. At the end of that time a firm suspensory ligament will have formed, and that will hold the uterus up. This is essential in conservative surgery on the tubes.

I never do ventrofixation. There is a marked difference between that and ventrosuspension. Fixation is a pernicious procedure. It immobilizes the uterus and interferes with diaphragmatic action of the pelvic structures. Rather than do fixation I would suggest knuckling the round ligaments and in this way shorten them and hold the uterus forward, by the operation of Ferguson, McGannon or Byford. The latter operates somewhat as I do. Bear in mind that the object is to suspend the uterus so that it can not become retroverted and again drag down the tubes and ovaries.

After the patient has been put to bed you may be nervous about the case for the first 24 or 48 hours, but the patient will usually get well. If you close the abdominal wound properly, there is no reason why the patient should have a hernia; neither is there any danger of intestinal paresis if the patient is properly treated. As soon as she comes out of ether she should be given a saline, to increase the vermicular action of the intestines, empty the stomach and carry away gas. Three, four, five or six Sedlitz powders should be given. Do not let the patient lie all the time on her back, but have the nurse move her first on one side and then on the other. This will prevent the formation of adhesions by changing the position of the intestines. The bowels should move at the end of 24 hours. This is important. The intestinal canal is the best drainage-tube you can have. Do *not* give morphin, for morphin will mask every symptom that can possibly arise; it will stop peristalsis; it will stop all secretions; it will permit sepsis; it will produce nausea which can not be distinguished from the continued nausea of ether or from the nausea of intestinal obstruction. No food should be allowed until after the bowels have moved. Then you can begin with milk and Vichy. You will find that this treatment will produce good results.

It is well to keep the patient in bed for fourteen or sixteen days. If you have made ventrosuspension I advise you to allow the stitches to remain in for twenty-one days. They may possibly cut into the abdominal wall and make it sore, or even cause a small stitch abscess, but this will do no harm. The first menstruation may be delayed. As soon as the first symptoms appear it is my practice to put the patient to bed and keep her there until two days after the flow has ceased, for she has not fully recovered from the operation, and the parts are not yet able to bear the distension and engorgement. (A mild cathartic should also be given.) If the ovary enlarges during this temporary stage of congestion, put the icebag on the abdomen, and keep it there day and night until the fever following the congestion has subsided. I give hot, vaginal douches at a temperature of 116 F. four times a day for such a condition. If this is unpleasantly hot to the external genitals, I apply an ointment of aristol or zinc. I do not poultice the abdomen. The icebag is better. Intercourse should be forbidden for two months after the operation.

Since 1887 many operators have taken up this conservative work and excellent results have been recorded. The work has advanced to such an extent as to revolutionize pelvic surgery and save to thousands of women appendages that would formerly have been sacrificed. The operative mortality is significant, sex is maintained, the subjective and objective symptoms are relieved in the vast majority of cases, and over 10 per cent. of the women are known to have continued to bear children. When we bear in mind that the majority of these cases can not be followed up it is reasonable to suppose that the number of parturients is much in excess of 10 per cent.

The following material, which I have secured by correspondence, is appended in alphabetical order:

W. H. BAKER, BOSTON.

One case. Removed one ovary and tube. Resected other ovary. Woman became pregnant.

This case is peculiarly interesting because the patient with one-half of one ovary gave birth to twins.

H. J. BOLDT, NEW YORK.

Total number of cases	82	Which ovary not stated	1
Left ovary diseased	32	Left tube resected	20
Right ovary diseased	33	Right tube resected	19
Which ovary not stated	13	Which tube not stated	1
Left tube diseased	24	Left ovary removed	0
Right tube diseased	23	Right ovary removed	4
Which tube not stated	1	Left tube removed	3
Left ovary resected	26	Right tube removed	4
Right ovary resected	26	Ventrosuspensions	7
Which ovary not stated	12	44 patients, average age	30
Left ovary punctured	4	Pregnancy	1
Right ovary punctured	3	Died	0

Dr. Boldt adds:

My opinion, based on numerous observations, is that whenever possible a part of the pelvic organs should be saved by plastic surgery instead of being removed by radical operation. I have not found that conservative operations done on patients who have suppurative disease of the adnexa have been productive of subsequent pregnancies, but the menstrual function has been retained, which is very essential because of the nervous system.

My invariable rule when operating on ovarian tumors has always been to leave whenever possible a part of the ovarian stroma, not so much in the hope that pregnancy will follow, but in order to maintain the function of menstruation.

I hardly think ignipuncture of the ovaries justifiable or conservative; best left alone.

J. BRETTAUER, NEW YORK.

Total number of cases	31	Right tube resected, etc	7
Left ovary diseased	12	Which tube not stated	10
Right ovary diseased	11	Left ovary removed	3
Ovary diseased not stated	13	Right ovary removed	4
Left tube diseased	11	Which ovary not stated	3
Right tube diseased	13	Left tube removed	3
Tube diseased not stated	12	Right tube removed	6
Left ovary resected or punctured	7	Which tube not stated	2
Right ovary resected or punctured	7	Pregnancies	3
Which ovary not stated	11	Ventrosuspensions	2
Left tube resected, etc	8	Appendectomy	1
		Vaginal section, at least	17

A. BROTHERS, NEW YORK.

Total number of cases	50	Pregnancies	8
Vaginal sections	18	Ventrosuspensions	6
Laparotomies	25		

Dr. Brothers, in reporting the 50 cases, regrets his inability to give fuller details concerning the occurrence of pregnancy, because the majority of his cases were

hospital patients whose after-history could not be traced. So far as known to him, his results were satisfactory.

W. L. BURRAGE, BOSTON.

Total number of cases	187	Anatomic recovery, per cent.	64
Symptomatic recovery, per cent	73	Died	3
		Pregnancies	23

The summing up of Dr. Burrage's statistics readily evidence the fact that he is one of the most successful operators of whom it is my privilege to quote. I wish I could publish his paper in full, as it is a most convincing argument in favor of the work of which my paper is the subject.

A. P. CLARK, CAMBRIDGE, MASS.

Total number of cases	13	Average age, over	30
Pregnancies	3	One or both ovaries diseased	5
Recovery	12	One or both tubes diseased.	8
Improved	1	Resection of tubes or ovaries, per cent	100
Married (date for 3 only)	8		

HENRY C. COE, NEW YORK.

He has had five cases of pregnancy following conservative surgery of the ovaries, etc.

E. B. CRAGIN, NEW YORK.

Total number of cases	33	Right tube resected	13
Left ovary diseased	26	Left ovary removed	16
Right ovary diseased	27	Right ovary removed	17
Left tube diseased	32	Left tube removed	17
Right tube diseased	29	Right tube removed	15
Left ovary resected	10	Implantation of ovary	1
Right ovary resected	10	Died	1
Left tube resected	16	Married	33

Dr. Cragin reports that in only one of his cases was second operation required.

He reports only one pregnancy because of inability to trace his cases, they having been hospital cases only.

C. G. CUMSTON, BOSTON.

Total number of cases	47	Bilateral resection of ovary.	31
Married	20	Unilateral resection of ovary	16
Single	27	Pregnancies	12
Age, from 18 to	35	Recovery	25
Ovarian dysmenorrhea, per cent.	100	Improvement, decided	12
		Unknown	10

In all of Dr. Cumston's cases we find that fine catgut was used as suture material in the ovary with good results. He reports among the number one most interesting case where with only half an ovary remaining the patient gave birth to a healthy child two years after operation.

RICHARD DOUGLAS, NASHVILLE, TENN.

Total number of cases	30	Resection of tubes	7
Married	5	Resection of ovaries	23
Salpingitis	7	Pregnancies	5
Cystic ovaries	23	Died	0

In summing up his report Dr. Douglas is of the opinion that many of the small cystic ovaries formerly resected do not need anything but puncture of the cysts. He is also convinced that either gall bladder or appendiceal operations should have accompanied the work. He is not in favor of resecting the tube.

A. PALMER DUDLEY, NEW YORK.

Total number cases	269	Left tube removed	29
Left ovary diseased	204	Right tube removed	26
Right ovary diseased	188	Ventrosuspension	99
Left tube diseased	59	Appendectomies	32
Right tube diseased	53	Pregnancies (to term, 35; abortions, 8)	43
Left ovary resected	130	Implantation of ovary	7
Right ovary resected	141	Vaginal section	11
Left ovary punctured	25	Kidney suspension	1
Right ovary punctured	30	Married or single (data on)	198
Left tube resected	28	Married	154
Right tube resected	22	Single	44
Left ovary removed	41		
Right ovary removed	26		

These operations were performed at the following places: Private sanitarium, New York City, 101; private cases elsewhere, 41; Mary Hitchcock Hospital, Dartmouth College, 14; Mary Fletcher Hospital, University of Vermont, 5; Harlem Hospital, New York City, 32; Post-Graduate Hospital, New York City, 76.

SHERWOOD DUNN, LOS ANGELES, CAL.

Dr. Dunn read a paper before the American Association of Obstetricians and Gynecologists, Aug. 18, 1897, on conservatism in ovarian surgery.[1]

J. G. EARNEST, ATLANTA, GA.

Total number of cases	8	Cured or much improved	7
Resection of ovaries	8	Not improved (ovaries afterward removed)	1
Bilateral oöphorectomy (2d operation)	1	Pregnancy	0

Dr. Earnest favors conservative work, and from his own successes is encouraged to continue.

ALEX. HUGH FERGUSON, CHICAGO.

Total number of cases	69	Pregnancies	12
Left ovary diseased	46	Ventrosuspension (Kelly)	5
Right ovary diseased	23	Anterior transplantation of round ligaments (Ferguson)	17
Left tube diseased	22	Appendectomies	30
Right tube diseased	17	Cholelithotomies	13
Left ovary resected	26	Nephrotomies	5
Right ovary resected	16		
Left ovary removed	20		
Right ovary removed	7		

Dr. Ferguson also describes six additional cases of surgery on the tubes with or without participation of the ovaries. Owing to the complicated character of the intervention these cases are not enumerated with the preceding. No pregnancies followed.

C. C. FREDERICK, BUFFALO, N. Y.

Total number of cases	125	Right ovary removed	25
Right ovary diseased	48	Left ovary removed	47
Left ovary diseased	65	Number of pregnancies (one woman pregnant 3 times since operation)	8
Right tube diseased	60	Ventrosuspensions	12
Left tube diseased	73	Appendectomies	8
Right ovary resected	23		
Left ovary resected	18		

J. RIDDLE GOFFE, NEW YORK.

Total number of cases	115	Laparotomies	4
Vaginal sections	111	Pregnancies	10

Professor Goffe is one of the most earnest advocates of the vaginal route (through the anterior fornix) for this form of work that we have in America. The above statistics evidence that fact. He has many followers, and the question is still debatable with us in America, viz.: Abdominal versus vaginal route.

A. GOLDSPOHN, CHICAGO.

Dr. Goldspohn is justly entitled to rank as one of the pioneers in conservative surgery of the ovary. On June 5, 1901, he read a paper[2] before the American Medical Association in which he reported 97 cases of cystic degeneration of the ovary treated conservatively by incision and ignipuncture. Pregnancy followed in 10 cases. In all laparotomies results were satisfactory two years after intervention. In one-half the vaginal sections, results were unsatisfactory. Results were good after inguinal section.

S. C. GORDON, PORTLAND, ME.

See text of my article, in which two cases are mentioned.

J. D. GRIFFITH, KANSAS CITY, MO.

Cases of resection of ovary.	4	Ventrosuspensions	4
Age, all under	28	Pregnancies	3

WILLIAM H. HUMISTON, CLEVELAND, OHIO.

Total number of cases	5	Right ovary resected or punctured	0
Pregnancies	5	Left ovary removed	1
Left ovary diseased	4	Right ovary removed	5
Right ovary diseased	5	Left tube removed	1
Left tube diseased	1	Right tube removed	5
Right tube diseased	5	Ventrosuspensions	3
Left ovary resected or punctured	3		

According to Dr. Humiston's report, one woman became pregnant after both ovaries and tubes were supposed to have been removed. Evidently some portion of ovarian structure must have been left. See quotation from Dr. Gordon's report.

(To be continued.)

1. Med. Record, Oct. 2, 1897.
2. THE JOURNAL A. M. A., Aug. 24, 1901, p. 489.

Original Articles.

CO-OPERATIVE WORK IN REGISTRATION METHODS AND VITAL STATISTICS.*

W. A. KING.
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WASHINGTON, D. C.

The subject of vital statistics, or rather of mortality statistics, which is the only branch discussed in this paper, is perhaps more interesting to members of this Association than to any other class, inasmuch as in certain particulars they are responsible for the returns on which these statistics are based, and because such statistics furnish the means by which progress in medical science is measured.

To accurately serve this and other purposes, however, it is necessary that all statistics of this kind—national, state and local—shall be compiled under a definite system of general application, and that the data shall be collected under a similarly definite system, having direct reference to the exact statistical and other uses for which they are designed.

Many systems of collecting the data have been experimented with, but to all persons of extended practical experience it has become a settled principle that no adequate results can be secured except through compulsory laws requiring the registration of each death and the obtaining of an official burial or removal permit before the body is interred or otherwise disposed of. It may safely be said that unless this is made the fundamental requirement, the registration of deaths will be incomplete, and any statistics based on the recorded data will be defective.

Under our form of government all legal provisions on the subject must be left to the individual and independent action of the several states, or of the cities organized under state laws, and while many of the states and most of the principal cities have laws or ordinances providing for the registration of deaths, they differ widely in their requirements and results. A good many of them have been futile from their inception because the proper fundamental principles have not been observed.

The greatest utility of registration to the general public, and as still more particularly affecting the medical profession, consists in the availability of the data for tabulation and analysis of the agencies affecting health and disease. As stated by Dr. Elisha Harris: "The practical relation of well-kept and complete records of mortality to the correct estimation of sanitary experience and prevention of diseases and premature death is so important that sanitary authorities and the wise and effectual application of public health measures demand that the mortality registration shall be both complete and accurate." The statistical treatment of the data also demands that they shall be uniform, so that the tabulated results may reach their highest value for comparative and analytical purposes. They are not so now.

The great desirability of uniformity in the general provisions of law, of system, and of methods of securing and tabulating results has long been recognized by all persons who have either attempted to make original compilations of the returns from different places, or to extract comparable figures from the various statistics published, and frequent efforts have been made to bring about a more satisfactory condition of things in this respect.

Success in this direction, however, depends on many other things beside a general sentiment in its favor. It requires a vast amount of hard, continuous and persistent work, time and money, that can be effectually supplied only by some body that has a permanent organization and a paramount interest in the general—as distinguished from the local—results, and can become the active agent of the various interests in determining proper lines of action, forms and methods; in publishing and distributing the necessary documents to all parties whose approval and co-operation are necessary, and beyond this in keeping all of the machinery up to the mark after it is put into operation.

Fortunately, this work can now be performed by the United States Census Office, which has been made a permanent bureau of the government and is charged with the preparation of an annual report on vital statistics of all states and cities that maintain a complete and satisfactory system of registration. Considerable progress has already been made in this work, and it is the purpose of this paper to explain what has been done, what is being done, and what is contemplated in this line, and the relation of the various agencies in promoting the extension of the registration system and the improvement of its dependent statistics.

The plan for extension and improvement of registration methods and results developed by the census office, as the central compilation bureau and the active agent in carrying it into effect, in co-operation with the authorized representatives of the principal organizations interested—so far as such bodies have acted in the matter—and the principal registration officials, may be stated as follows:

1. To determine the reasons for failure of so many of the laws providing for registration, and to formulate the principles on which legislation must be based to avoid failure.

2. To construct and recommend for general adoption as a standard form for reporting deaths a certificate or return, of convenient size and arrangement, that shall provide for all of the details required for legal, statistical and other purposes.

3. To outline certain correct methods of practice with respect to the examination, filing and preservation of certificates and of making returns to state officials, for the guidance of local registrars who receive the certificates and issue burial or removal permits.

4. To decide on a satisfactory system of classification of causes of death for statistical purposes and to furnish compiling officials a comprehensive statement of the details of the classification, with a working index by which the deaths reported in thousands of different terms can be uniformly compiled under the proper titles.

5. To furnish all practicing physicians a descriptive statement of the classification adopted, with an explanation of its practical application in statistical work, and a list of terms very frequently used by them in reporting causes of death concerning which more definite information is necessary to permit proper classification.

6. To advise medical colleges of the nature and scope of the movement undertaken, and to suggest a course of instruction for medical students in registration methods and statistics.

7. To make a study of the forms of statistical tables published by local authorities in annual reports, and

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. S. Fulton, Seneca Egbert and H. M. Bracken.

monthly or weekly bulletins, with the view of formulating a uniform series of tables considered desirable for this purpose.

8. To determine what forms of tables should be included in the annual reports of the census office in order to furnish the greatest practicable amount of information for general purposes.

9. To enlist the assistance and co-operation of all organizations, societies, or persons interested in the subject of registration or its results, in reaching satisfactory conclusions regarding each projected step in the proceedings, and, finally, in carrying each step into practical effect.

A beginning was made with the publication of Census Circular No. 71, containing a paper prepared by the experienced and capable registration officials and statisticians constituting the committee on demography and statistics in their sanitary relation of the American Public Health Association, which paper outlines the essential requirements of a law for the registration of deaths and prescribes a standard form of death certificate, with an explanation of the use and importance of the items of information called for.

Following this general plan, the international classification of causes of death, then coming into general use in the United States, was adopted by the census office for its annual reports, and work was at once commenced to make the extensive labor involved in classifying the returns received from all registration areas available for the benefit of local statisticians, by preparing a comprehensive index to the classification as applied in practical work.

The subject of uniformity and progressive action was presented to the consideration of the Conference of State and Provincial Boards of Health of North America, at its meeting in 1902, and that body gave its approval to the movement by the appointment of a committee to co-operate in its advancement and by the adoption of the following resolution:

RESOLUTION OF THE BOARDS OF HEALTH CONFERENCE.

Resolved, That a committee be appointed by the Conference of State and Provincial Boards of Health of North America to co-operate with the United States census office and with similar committees from the American Public Health Association, American Medical Association and from other organizations, in the promotion of the uniformity and comparability of mortality and other vital statistics and their satisfactory presentation in statistical reports and bulletins.

The "Manual of the International Classification of Causes of Death" was then printed and distributed by the census office. This explains the titles of the classification—their application is statistical work—compares the classification with that previously used, and gives an alphabetical index showing to which titles nearly 2,000,000 deaths reported at the censuses of 1890 and 1900, in thousands of different terms, were referred. This is fully cross-referenced, and the terms are also rearranged in a tabular list showing exactly what terms are included under each title. Certain general rules for the disposition of cases in which two or more causes of death were jointly reported are included. Further work is in progress for deciding a satisfactory method of disposing of jointly returned causes of death adaptable for general use. This very difficult problem appears to have been solved by Dr. Cressy L. Wilbur, medical referee for the census vital statistics, in his plan of numerical rating, on which he has prepared a special paper to be presented to the consideration of this Association. So far as tested here the plan promises admirable results attainable by a simple and easy method.

The general adoption of the international classification and the use of the "Manual" referred to will insure a comparability in the various mortality statistics published that can not be secured in any other way, and the notes and memoranda expressing the opinions of all persons using the classification on the merits of the classification itself will be filed and arranged for presentation to the commission of revision, which holds its next meeting in 1910. In this way the united opinions of all American users of mortality statistics can be made most effective in securing desirable modifications in the classification. All persons who make use of the international classifications are invited to file any notes, criticisms or suggestions for this purpose that appear pertinent to them.

The work of the census office and of the committee on demography, also the "Manual" and the "Standard Certificate" referred to above, were specially endorsed and approved by the American Public Health Association at its last annual meeting (Dec. 8-12, 1902) in this city, and the committee was authorized to represent that association in further work on the same lines. As a very complimentary recognition of the work of the census office the chief statistician for vital statistics was appointed chairman of the committee for the present year. The following resolution was adopted by the association:

RESOLUTION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

Resolved, That the efforts of the committee on demography and statistics of this association, in conjunction with the United States census office, to secure the extension of the registration area by the enactment of suitable laws and the use of a standard form of certificate of death, as shown in Census Circular No. 71, be heartily commended and that the committee be further authorized and directed to co-operate with the census office, the United States Public Health and Marine-Hospital Service and other departments of the Federal government interested in vital statistics and with similar committees from other associations in the work of promoting the adoption of suitable registration laws and the extension of the registration area, the proper compilation and presentation of vital statistics by states and cities in weekly or monthly bulletins and annual reports, and also in further work relating to the extension and practical use of the international classification of causes of death, the disposition of jointly returned causes and all preliminary work relating to the next decennial revision.

A resolution was drafted and presented to Congress reciting the condition of registration in the United States; the necessity for registration under uniform laws; describing the movement initiated by the census office in conjunction with the American Public Health Association; expressing approval of the movement, and requesting "the favorable consideration and action of the state authorities, to the end that the United States may attain a complete and uniform system of registration." This resolution passed both houses of Congress, and was approved by the President Feb. 11, 1903. The text of the resolution is given below:

RESOLUTION BY CONGRESS.

WHEREAS, The registration of births and deaths at the time of their occurrence furnishes official record information of much value to individuals; and

WHEREAS, The registration of deaths, with information on certain points, is essential to the progress of medical and sanitary science in preventing and restricting disease and in devising and applying remedial agencies; and

WHEREAS, All of the principal countries of the civilized world recognize the necessity for such registration and enforce the same by general laws; and

WHEREAS, Registration in the United States is now confined to a few states, as a whole, and the larger cities, under local laws and ordinances which differ widely in their requirements; and

WHEREAS, It is most important that registration should be conducted under laws that will insure a practical uniformity in the character and amount of information available from the records; and

WHEREAS, The American Public Health Association and the United States census office are now co-operating in an effort to extend the benefits of registration and to promote its efficiency by indicating the essential requirements of legislative enactments

designed to secure the proper registration of all deaths and births and the collection of accurate vital statistics, to be presented to the attention of the legislative authorities in non-registration states, with the suggestion that such legislation be adopted; now, therefore,

Resolved, By the Senate and House of Representatives of the United States of America in congress assembled, that the Senate and House of Representatives of the United States hereby expresses approval of this movement and requests the favorable consideration and action of the state authorities, to the end that the United States may attain a complete and uniform system of registration.

(Approved Feb. 11, 1903.)

Following this action, a circular (No. 100) was prepared containing the resolutions adopted by Congress and the American Public Health Association, the paper of the committee on "The Essential Requirements of a Law for the Registration of Deaths and the Collection of Vital Statistics," and a specimen form of an adequate law, drafted in accordance with the principles laid down by the committee. This circular has been sent to the governors of all states that do not now have an effective system of registration. It has also been sent to all medical societies, medical journals, registration officials, and other persons known to be interested in the subject.

The form of law presented in this circular is an improvement in many respects over any of those now in operation. The ideas governing its construction may be stated as follows:

1. The creation of a state registration service, fully authorized to carry out the purpose of the law.

2. The prohibition of burial or removal of dead bodies without a properly authorized permit, based on a complete and satisfactory certificate of death.

3. The use of a uniform certificate for obtaining the information desired as a precedent to issuing the permit.

4. The fixing of the responsibility for making the certificate and filing it with the local registrar, and the obligation to make the return complete in all of its details.

5. The fixing of responsibility on the local registrar for a critical examination of the return and for seeing that all of the information required is properly stated before accepting it.

6. The fixing of responsibility on the state registrar, or chief administrative officer under the law, for examination of all returns made by local registrars, and for immediate action in case of delinquencies, or to obtain data, corrections, etc.

These provisions are based on the theory that the purpose and intent of any such law is to secure a complete and properly executed return of every death that occurs —that the form of certificate adopted indicates what constitutes a complete and proper return—and that no return is complete and proper that does not supply the data desired for all purposes of registration as fully and circumstantially as is possible, by searching inquiry, under the conditions of the case.

Replies so far received from governors show that many of them are favorably disposed toward recommending such legislation at the next session of their legislatures, indicating a probable extension of the registration area that is most gratifying. To insure such action the medical societies, journals and physicians in each state should unite to exert their powerful influence. State and county medical societies, in particular, should adopt some concerted plan of action by which the cooperation of the legislative authorities can be secured. Probably all of the members of this Association are also members of state or local societies, and, therefore, each one can contribute materially to the success of this movement by his personal efforts.

The most perfect laws, however, do not execute themselves, and to reach, interest and instruct those persons whose duty it is to administer the laws or to make reports under them, other circulars have been prepared, as follows:

No. 101, on "Practical Registration Methods," designed for the guidance of local registrars, describes the "Standard Certificate" and explains the necessity and use of the various details required concerning each death; outlines a simple system of filing and preserving the records and of making returns to state officials; gives the titles of the international classification and explains the relation of causes of death as reported to classification for statistical purposes. It also gives a long list of indefinite or unsatisfactory terms frequently used by physicians in reporting deaths, that should not be accepted in such shape, with explanatory notes showing what further information should be required in such cases. This circular will be sent to all registration officials.

No. 102, on "Relation of Physicians to Mortality Statistics," is issued for the use and benefit of physicians who have to make out certificates of death in compliance with registration laws, by acquainting them with the scope and requirements of the international classification, which has been adopted by all of the registration states and by most of the principal registration cities for the compilation of their mortality statistics. Such statistics, to be comparable, must be uniform; and to be valuable for scientific purposes they must be accurate. Their chief value is in the distribution of deaths by causes, but the cause of death must be properly stated before it can be properly classified. In this particular the entire value of the statistics depends solely on the lucidity and certainty with which the physicians supply the information.

In all statistics of deaths by causes there is much too large a proportion of unknown or indefinite items for which the physicians alone are directly responsible and which they alone can remedy.

It is probable that the defect in this particular is largely due to the fact that there has heretofore been no general and comprehensive plan to direct the attention of all physicians to the use of their certificates for statistical purposes, and to exhibit the necessities and requirements in this respect by explaining the classification used, and by specifying wherein certain returns are incomplete, indefinite, or unsatisfactory. This circular is designed to furnish such information. It will be sent to every physician in the country, and it is confidently expected that they will appreciate the importance of the matter—the purpose for which the circular is issued—and will manifest their appreciation by making their certificates conform to the suggestions noted, as far as possible.

It should be considered that the classification, in itself, is but a selection and arrangement of titles only, under which deaths reported in thousands of different ways must be compiled, and that the assignment of any death to the proper title requires a definite statement of the course of disease or the sequence of causes resulting in the death.

Following the detailed list and explanation of the titles is a list of indefinite and unsatisfactory terms very frequently used by physicians, with similar explanatory notes. The terms in this list can not be properly classified as given, and should never be used without further explanation.

It is not to be expected that an entirely definite and accurate statement of the cause of death can be made in

every case. There will undoubtedly be cases in which the exact cause can not be ascertained and others in which an accurate diagnosis is impossible, but an observance of the suggestions made in this circular will very largely reduce the number of cases that must necessarily be classed as unknown or ill defined.

What has been said above relates wholly to the statement of the cause of death, which is always furnished by the physician. But while this is the most important item, a complete return of any death requires a statement of other personal and statistical particulars concerning the death, and the blank certificate or return used for reporting deaths should be regarded as simply a specification, in convenient form, of the legal requirements in the case, all of which are intended to be observed.

The relation to and influence on the mortality from different diseases, of age, sex, color, conjugal condition, nativity, parent nativity and occupation, are of the utmost importance, and the preparation of uniform statistics for all registration states and cities requires that these items, and others necessary for record, shall be given just as fully and as accurately as the cause of death.

The making out of a certificate of death should not be considered a perfunctory matter. A complete and accurate certificate is required of physicians as a legal obligation, under the law—as a moral obligation to their clients for the protection of the rights and interests of those dependent on them—and as a professional obligation, to further the advancement of medical science. In the last respect it should be regarded as one of the highest duties of physicians, as scientific, professional observers, to record their experience in individual cases in accordance with some definite and general system so that the whole result of such professional observations may be properly classified, tabulated, analyzed and made to contribute in the greatest possible degree to the sum of knowledge essential to material progress in medical and sanitary science and public hygiene. In this respect registration is only an intermediary process—a means of adapting a mass of observed facts to systematic treatment and their reduction to numerical standards for analysis and comparison. There can be no doubt that if physicians will take this view of the subject, and act accordingly, they can make the statistics derived from their returns much more accurate and valuable.

Circular No. 103, on "Medical Education in Vital Statistics," gives a synopsis of the circulars previously described; explains the movement for the extension and improvement of registration data and statistics on uniform lines, and suggests to medical colleges and schools the desirability of initiating a course of instruction for students on registration methods and vital statistics. This circular has been sent to all medical colleges and schools.

All of the circulars and the "Manual," referred to above, relate to different phases of the same general plan. By means of them it is sought to convey to all persons interested a comprehensive knowledge of the details of the plan and of their relation to the same, in accordance with the ideas and opinions of the experienced registration officials and statisticians who have joined in the movement. The census office has cheerfully assumed the labor and expense of preparing, printing and distributing these documents and of the correspondence incidental thereto, so as to enable all those interested to get together and to co-operate effectively in the movement for uniformity and accuracy.

The sole object of these circulars is to promote uniformity in laws, forms and methods, for mutual advantage, and to do so in accordance with the opinions expressed by authorized experts. The form of law given in Circular 100 is designed, primarily, to apply to states which do not now have effective laws on the subject, and the other circulars have been framed to assist in carrying out laws constructed on the lines indicated. Some of the provisions of law specified and of the suggestions made as to forms and methods might be adopted to advantage in all of the states and cities now classed as "registration," and it is hoped that whenever changes in existing laws, methods or forms become necessary or convenient they will all see the advantage of uniformity, and will adopt measures in harmony with those described.

The circulars on "Practical Registration Methods" and "Relation of Physicians to Mortality Statistics" are in many respects applicable, whatever the provisions of existing laws, forms of certificates, or methods of practice may be, but they will not be sent to any local registrars or physicians in registration states or cities until such action is approved by the local registration officials. So far as heard from, such officials have given their hearty approval and consent, and have expressed the opinion that the circulars will prove of great value in securing more complete and accurate returns.

The preceding statements describe the movement for the extension and improvement of the registration system and for increasing the value of the recorded data, principally with reference to their use for statistical purposes—representing the ultimate stage of mortality registration as here considered.

In the practical work of compiling and presenting such statistics there is also room for improvement in order to make them more complete, more accurate, and more thoroughly comparable. This is recognized and provided for in the general plan, as stated in the first part of this paper.

This subject was discussed at the last meeting of the Conference of State and Provincial Boards of Health of North America, and was covered in the resolution then adopted (q. v.), and will be taken up by the committees of the various associations which join in the movement for uniformity.

The general adoption of the "International Classification of Causes of Death" and the use of the "Manual" insures a much greater degree of accuracy and comparability in the statistics of deaths by causes, but there are other important factors the relation of which to the cause of death and to each other should be shown in a more uniform manner than at present. The action of the committee will, therefore, be directed toward formulating a series of uniform tables to be recommended for use in all annual reports and monthly or weekly bulletins published by registration state or city offices. To assist the committee in this direction the census office is now collecting and arranging all forms of statistical tables published in the local reports or bulletins.

It is the desire of the census office that its annual reports relating to mortality statistics in registration areas shall supply the greatest possible amount of information desired by all persons who make any practical use of the data. In order to develop ideas and opinions on this subject a series of tentative tables has been prepared,

showing what forms have been selected as a basis for consideration. These will be sent to all of the principal registration officials who compile statistics, committees of representative bodies, etc., and suggestions will be invited concerning changes or additions necessary to adapt them to the widest uses. Within the limitations imposed by the character of the data available, time and space in publication, the effort will be made to supply what is wanted.

The first annual report is now being compiled. It will, necessarily, form the model which subsequent annual reports will follow until the next census is taken in 1910, in which year also the international classification will be revised. This makes it particularly desirable that the ideas of officials and statisticians as to the contents of these reports be communicated promptly.

One observation which has a bearing on this matter and which also shows how improved methods in the census office have been of advantage to users of these statistics, may be permitted here; the census reports are generally distributed through the members of Congress, in the same way as other public documents, and heretofore senators and representatives have been notified that certain reports had been placed to their credit, leaving the public and persons interested to find out that the reports had been issued and to make application therefor to their member of Congress. Under this system many persons interested in particular reports did not discover that they had been published until it was too late to make use of them, and many other persons received copies of reports in which they had no particular interest.

When the "Twelfth Census Report on Vital Statistics" was published (July, 1902) it was determined to remedy this condition as far as possible, and as soon as the volumes were available for distribution a circular letter was prepared and sent to all registration officials, members of scientific societies and persons known to be interested, notifying them of the fact and advising them how the reports could be secured. This made it certain that all such persons would promptly receive the report —if they wanted it. And the demand has been such that a third edition is now being printed.

In the circular letter referred to, announcing the publication of the report, criticism and suggestions were invited, and this statement was included: "Under the permanent census organization, annual reports will be made for registration areas, and I will be particularly obliged for practical suggestions as to forms of tables, etc., that you think should be included in order to make the statistics of the greatest value to all concerned."

Many complimentary acknowledgments were received, but no "practical suggestions as to forms of tables" for the annual reports have yet come to hand.

As a general thing, statisticians compiling such reports are anxious to give the public what it wants, when it is possible for them to ascertain what is wanted.

If the movement described in this paper meets with the approval of the Association, it is hoped that a committee will be appointed to act in co-operation with the committees of other bodies. Its assistance will be most valuable and most welcome.

DISCUSSION.

DR. SENECA EGBERT, Philadelphia—I think the duties of all men in my profession have been increased since the beginning of this work of which Mr. King so interestingly speaks. We ought to do all we can to further this work of registration and to increase the registration area. The great difficulty is going to be in the rural districts. We have a large number of our cities fairly well registered, in comparison with our rural districts. If I am not mistaken, only 14 per cent. of our rural population have anything like well-kept statistics; and that is mainly in the New England states. As to other cities, a much larger proportion have fairly good registration, although the methods of collecting and recording statistics have not been at all uniform; and, as we see to-day, the labor devolving on the Census Bureau has been materially increased by this irregularity and lack of uniformity in registration. Now, the Census Bureau is sending to every physician in the country information about the international classification, and they are also urging our various registering officers to adopt the necessary forms and data, so that eventually there shall be no difficulty at all in securing accurate returns. In Philadelphia we average from 400 to 450 deaths a week and, with a properly instructed clerical force, we should have no difficulty at all in getting proper returns, according to the forms agreed on, as to practically every death. For years, every month that I was at all dilatory in the matter, I have had a man come to my office to obtain my birth reports for the preceding month. Now, this could be done just as easily with regard to the reports of deaths. If such an employe were to call on physicians with the proper blanks and explain the importance of the matter it would not be very long before we would be getting an almost perfect return of deaths in the city. But this can not be done so readily in the country, and it will be more difficult to obtain the data than in the cities. I do not think the average physician to-day is impressed with the importance of this matter as he should be. In regard to my own instructions to students, I have not properly appreciated it, but hope to do better hereafter. Nor do I think that the sending out of a letter or circular to every physician of which we have been told to-day is going to be sufficient. I think it is going to be a matter for the state municipal and governmental authorities to take up and drill into the profession at large, until we all come to a thorough appreciation of it; and I think few things will help to educate a thinking man as to the importance of this matter so much as the data given in the last Census Reports. It was a revelation to me to see how progressive science has cut down our death rate in the last decade. It gives me more hope in my personal work than I ever had before. I think it would be a good thing if some of the most striking parts of these data could be condensed and sent to every professional man in the country, along with these circulars of information and forms, to impress on him the value of the work being done, and how much greater that value would be if he did his share. The physicians of Philadelphia were recently notified not to use the old-fashioned death certificates, and were requested to make our reports according to the new forms, which call for the same data as the standard certificate of death, though not exactly like it in detail. That was within the last three months, I think. Our municipality has practically adopted the suggestion of Mr. King.

DR. CRESSY L. WILBUR, Lansing, Mich.—Did Philadelphia do anything with reference to international classification?

DR. EGBERT—I understand that the city will soon endeavor to adopt the international classification of causes of death.

DR. C. L. WILBUR—Philadelphia is probably the oldest city in the country to use the alphabetical system, and I was in hopes that it would join with Boston, Washington and other cities in using the international classification. We are using the standard blank in Michigan. It is adopted by law, I think, in Vermont, and it is used in Indiana, New York and Colorado. I like it better than our old form. As to the country districts, I think in Michigan we have reports from the township clerks of every township in the state. Some of them in the upper peninsula do not average five inhabitants to the square mile; nevertheless, they all report either that no deaths have occurred, or give the names of those who died, sending in the detailed certificates. We never have a

district delinquent for more than two consecutive months. If they do not make reports promptly we get after them; and they all take pains—as far as they are able (some of them, of course, not being educated men medically)—to send in the returns in correct form. If any items of special importance are omitted we mark a red cross at the place and then send a duplicate certificate, with a cross at the corresponding place, to the registrar, with a circular letter explaining the uses of the information specially desired, pointing out the items omitted, and asking him to see the undertaker, or whoever had charge of the body, get the data that was omitted, and send it on with the next report. We also call his attention to the fact that he should not accept an imperfect report or certificate, and that if he does not supply the missing items, or give good reasons why they can not be secured, deduction will be made from his compensation as provided by law; that is, 25 cents for each certificate. We also write the physicians when necessary. When one sends in a return of death from, say heart failure, or cancer, without specifying the part of the body, we write him a personal letter telling him why we need the information, and that his return is incomplete. We are also going to take the pamphlet that the Census Bureau distributes, print a short list of the most unsatisfactory returns, mark them with an index finger, and send them to all these physicians; so that they will always have their attention more or less directed to the fact. The registrars will also be instructed to refuse to accept (as they have done in a number of cases) grossly unsatisfactory returns such as "heart failure." Unfortunately, our registrars are changed often. If we could only keep them in office for longer terms we could accomplish better results. This pamphlet I regard as one of the most important actions ever taken for the improvement of registration. We send it out to all our physicians, with a circular commending it to them. We also sent a circular to all our registrars, with a special pamphlet of that sort. I believe that by referring the physicians from time to time to this pamphlet, and with the co-operation of the registrars, we will work out great improvement in the accuracy of our statistics. It seems difficult for some of them to comprehend what ought to be said and what ought not to; and sometimes they leave out the main thing.

DR. EGBERT—Dr. Wilbur has shown the essence of the whole matter. There is a head in his state that follows up every man in the state. Unfortunately, however, our registrars are too apt to be changed about for political reasons. For many years I had considerable intercourse with reference to this matter with our former registrar, who was heartily interested in this subject. He went into it almost as Dr. Wilbur has gone into it here, because it was of much real importance to him; and he was always pleased to enter into the details of the subject and give any one whatever information he could. But he was deposed by a change in the political administration, and the city lost a valuable servant. As for Philadelphia, we have recently had a bill passed providing for a Department of Public Health and Charities, to be in charge of a physician who will appreciate the importance of the work. I would like to ask Dr. Wilbur to give us roughly the cost of maintaining the system in his state.

DR. WILBUR—The compensation is 25 cents per certificate of death, which is paid by the county, and is the only fee connected with the system. We exempt from that payment cities of 10,000 inhabitants and over, where the salary of the clerk is supposed to compensate him for the service. We have no birth certificates, though we have had a bill reported by the committee on state affairs of the legislature that provides for the registration of births. It was reported unanimously by the committee, but I do not know how much further it will go. It provides for a certificate of birth similar to that used in New York. There will be a fee of 15 cents to the registrar and 25 cents to the physician, making a total of 40 cents. This may be thought a little high by the legislature; but if they cut it down too much I fear that we shall not obtain satisfactory results. If we pass this law we may not get all the births, but I think we shall register about 95 per cent. of them.

DR. J. N. HURTY, Indianapolis—In the collection of mortality statistics in Indiana we follow pretty closely the system in use in Michigan; and we pursue the same method of keeping each individual certificate that Dr. Wilbur has described. After three years of this work we have no difficulty now in getting the number of deaths, ages, sexes, etc. The great trouble is to learn the correct cause of death. We have thought a great deal of how this is to be remedied. In many instances the physicians are not well enough educated to know what the cause of death is; and in other instances, despite their education, they do not know. So we thought for a while that it would be better for them to write in the word "unknown" when they did not know. We subsequently changed that opinion, however, when we began to get in numbers of certificates showing that nobody knew what the cause of death was, making the confusion worse than it was before. We have had many examples of that character. A state senator died. The cause of his death was declared to have been grip, and the immediate cause hemorrhage. That was the report of a practicing physician who was also a member of the legislature; but we subsequently found, on examining the corpse and taking the testimony of the doctor himself and of the embalmer who prepared the remains, that it was black smallpox, beyond question. Now, when we have such gross errors what are we going to do? We know we are getting the number of deaths, with locations, ages, sexes, etc., but we realize that our returns are woefully deficient as to the causes of death. We see no way out of the dilemma except through the better education of physicians. The teachers of hygiene, as Dr. Egbert has said, must dwell more particularly than before on this matter. They must pound it in and let the oncoming generation know how very important it is to be able to state definitely and exactly the chief and the immediate causes of the deaths that occur in their future practice. Now, when we receive a certificate that is not full and complete we do as Dr. Wilbur related. We do not send the original back, because we would have trouble in recovering it, but we send a duplicate printed in different ink; and we never let up until the physician or officer sends us an answer. We have complete control over our officers, because they can be discharged at any time for not performing their duty. They are on salary, and receive no fees whatever for collecting statistics. Out of our 675 reporting stations, we do not have an average of 12 that fail us each month. We get after them when they are delinquent, and eventually get a report from them before the month is half over. They must report by the fifth of each month, whether they have any deaths in their districts or not. I want to say something about Mr. King's sample law, which I read with some care. It is a most admirable law as a whole. I note he provides penalties for the interment of the dead without a permit, etc. The penalty is a fine of from $5 to $50 on the undertaker or other person who may bury the remains. I do not think that clause is going to make the returns even approximately perfect. A widow's child may die away out in the country. The neighbors come in and lay the body out, some one makes a coffin out of a pine box, and the child is buried without a permit. In such a case you could never enforce the penalty in any justice of the peace's court in the country. In the Indiana law we have a clause that usually brings a report. It provides that in the event of a burial without a permit the coroner must disinter the remains, hold an inquest, secure all possible data, enter the same on the blanks of the board of health, and report the result to the health officer having jurisdiction. There is also a fine of $10 to $100 on any undertaker or other person burying a body without a permit. That can readily be enforced against the undertaker, but not so in the instance I related; though the other clause can be and is enforced. We have had trouble in only a few instances, so severe is the penalty. Let it be done in one county, and the other counties within a radius of five will hear of it and learn the lesson. Then, the coroner is after a fee, and is

likewise in a position where he can plead that he must disinter, that he has no help for it under the law. They get the body out of the ground, summon the physicians who failed to make the report, summon all parties concerned; and after one experience that community never has any more burials without permits. However, as I have said, it is the cause of death that we have trouble with, and I am satisfied we will have that trouble for many years to come.

DR. J. S. FULTON, Baltimore—Many sanitarians dread the difficulties of rural registration. That fear seems to me somewhat exaggerated. What is wanting is a due appreciation on the part of cities and close communities of their dependence, for their own sanitary safety, on the sanitation of rural districts. In Pennsylvania probably 75 per cent. of the entire population are living under registration laws, more or less effective. It is municipal registration, however, leaving the rural districts wholly out of the mortality account. There is an ancient registration law still on the statute books of that state, but useless for want of a burial permit provision. Now, suppose the cities of Pennsylvania should realize that they owe their bad eminence in typhoid mortality to the rural districts. Suppose that Pittsburg and Allegheny, for instance, the worst typhoid cities in their latitude in 1900, should have a strong suspicion that their sources of infection lie in the perennial typhoid of the unregistered adjacent rural districts, could the villagers and rustics possibly defeat a bill which proposed to compel every part of the state to render monthly a full account of its mortality? This consideration would prevail, I fancy, even in Philadelphia, a city which is notorious in its class, but which is in typhoid mortality far exceeded by a dozen lesser cities in the same state. When the cities discover that they draw on the country districts for their supplies of typhoid and intestinal disorders as regularly as for their supplies of food and drink, the demand for registration of mortality in rural districts will be irresistible. Nor do I believe that rural communities object seriously to registration. In Michigan the registration law is not mandatory in areas of less population than 15 per square mile, but such areas are registered nevertheless, and are registered because they desire it. If all the registration data now regularly collected in such states as Pennsylvania and New York were assembled and properly displayed, I believe that 75 per cent. of the population would be found included, and that the advantages of registration would appeal effectively to a majority of the remaining 25 per cent. Such instances as have been cited by Dr. Hurty will inevitably arise. They have no numerical importance. They are easily met by administrative tact, and they need have no influence on the reliability of mortality returns in general. Another point about rural registration is that it is a very good check on municipal registration. Municipal registration is subject to many abuses that would be controlled if it were necessary to record every death somewhere, either where it occurred or at the true residence of the person who has died.

DR. CRESSY L. WILBUR—The question of density of population is most important in drafting the registration law of a state. If you do not have a sufficient supply of local registrars, so people can easily get to the local office, there will be an explosion. In some parts of Illinois, especially the southwestern part, which is sparsely settled, the present law, which was passed in 1890, has proved very obnoxious to the people. The law provides for only six registrars in the counties, in addition to the county clerk. This has proved to be the cause of so much trouble that there are now two or three bills pending to repeal the law for the whole state. The average population to the registrar should not be much more than 500, and the distance should not be over six miles, so that the people can easily get permits; and in that way we will have no violations of the law. I presume this will have to be taken into consideration in Pennsylvania, of which some parts are sparsely settled. It can be done in sparsely settled as well as in well-settled communities.

DR. H. M. BRACKEN, Minneapolis—We have found in Minnesota that it is not much harder to get statistics from the rural districts than from the small urban communities. We have registrars for each township, and many of them make good returns. Minnesota, unfortunately, is not classed with the registration states, although we have laws meant to be complete and thorough. Last winter we asked for a law requiring a burial permit in all cases of death, but the committee on public health was composed of men from the country, and they objected, using the same argument that Dr. Hurty mentioned, with reference to neighbors helping to bury the dead, without the usual formula of undertaker.

THE LIMITATIONS IN THE USE OF ACONITE AND VERATRUM VIRIDE.*

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Too much has been written on the possibilities or probabilities of the therapeutic value of drugs and not enough regarding the limitations of their use. It is only within a comparatively short time that physicians have relied on their knowledge of the pharmacodynamics, rather than on tradition based on empiricism, to guide them in their use of drugs. Like the rest of mankind, physicians are prone to follow the calf paths of tradition; and the works on therapeutics are full of references to the success of remedies used by individuals of repute, regardless of the known physiologic action of the drugs in question.

A few years ago I was much impressed by a remark of our eminent therapeutist, Dr. John V. Shoemaker, when he said that he had written so much on the therapeutic value of drugs and had taken so much for granted on hearsay evidence that he felt it a duty he owed the profession to write a book on the limitations of the use of drugs.

The size of our pharmacopeia and of our text-books on materia medica and therapeutics seems to be proof that we know too little about a great many drugs and not enough about a few. I quote from a recognized authority regarding the uses of aconite:

Dr. Murchison regards aconite as a remedy of great value for reducing the pulse and temperature in fever, and especially in the pyrexia resulting from inflammation. . . .

Dr. Bomford bears witness to the value of aconite in the remittent fevers of India. . . .

Dr. W. Dobie details four cases of pneumonia in which aconite, in small, frequently repeated doses, apparently cut short the attack. . . .

In puerperal fever, Dr. Playfair (Vol. II, p. 328) regards aconite in minute doses as a most valuable remedy. . . .

In tonsillitis, acute sore throat and in acute catarrh of children, Dr. Ringer strongly recommends the tincture. . . .

In acute rheumatism, aconite at one time was held in high esteem. . . . In rheumatic pains occurring in gouty subjects, Professor Graves has found it very serviceable. The same remark applies to lumbago. . . .

In neuralgia, aconite is a remedy of great value, but its use appears to be restricted mainly to those cases in which all signs of active disease are absent or have been subdued by other means. . . .

In sciatica, Dr. Fuller concludes that it proves a valuable and efficient remedy in many obstinate forms of the disease. . . .

Toothache is sometimes speedily cured by rubbing the gums with a few drops of the tincture. . . .

In tetanus the use of aconite in large and repeated doses was first proposed by Mr. De Morgan, who relates several cases illustrative of its efficacy. . . .

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. S. Solis-Cohen, George F. Butler and N. S. Davis, Jr.

In diseases of the heart, in which the chief indication is to diminish vascular excitement or irritability of that organ, aconite proves in the highest degree serviceable. . . . Even in pericarditis, when the heart throbs violently and thus produces extreme pain, aconite, according to Dr. Ringer, will quiet the heart and speedily ease the pain. . . .

In erysipelas, aconite was a favorite remedy of Liston. . . . To painful sprains and bruises and chronic arthritic swellings, lin. aconiti, locally applied, often affords speedy relief. . . .

In amenorrhea, Dr. Copeland prescribed the extract with decided benefit; and Dr. Ringer states that in sudden suspension of the menses, as from a cold, it may be employed with advantage; he likewise states that the acute stages of gonorrhea may be well treated with gtt. j. of the tincture every hour, and that the same treatment will often remove chordee. For the relief of severe uterine pains lin. aconiti externally applied occasionally affords relief when other remedies fail. . . .

Thus you see the novice might imagine that he was fairly well equipped to deal with nearly all human ills with this single drug. Is it strange, then, that with such brilliant promises, and after disappointments that must surely come, he should become a skeptic in medicine, and declare that he does not believe in the use of drugs?

Aconite and veratrum viride are old drugs and came into use when disease was little understood, when fevers were regarded as diseases and not mere symptoms of disease. The high temperature and rapid pulse were the abnormal conditions to be remedied, and it appeared perfectly rational to employ aconite and veratrum viride. They headed the list of drugs employed in the treatment of sthenic fevers, such as pneumonia, and it was thought that a great stride had been made in medicine in the supplanting of blood letting by the internal use of aconite and veratrum viride. And it was a move in the right direction, not because there was any real advantage in depressing the heart by the use of aconite, or of depressing it by venesection, but because it called the attention of the profession to the fact that it was necessary to conserve the energy of the patient in order that recovery might be insured. While, since the days of antiseptics, we have sometimes wandered away from that truth and have destroyed our patients in our attempts to exterminate microbes, we have always returned; and to-day it remains one of the fundamental principles in the practice of therapeutics.

PHYSIOLOGIC ACTION.

I know of no recent work having been done with aconite or veratrum viride and will, therefore, not go into the physiologic action any more than to summarize what is already well known.

The primary action is stimulation of the peripheral nerve endings; causing a tingling sensation, produced either locally or systemically; stimulation of the vasomotor mechanism, resulting in arterial constriction and slight diuretic effect; powerful stimulation of the respiratory center.

The secondary action is paralysis of the over-stimulated peripheral nerves, causing anesthesia; pronounced depression of the heart, which is augmented by the effect on the vagus; lowering of the blood pressure; and reduction of temperature, which is due at least partly to increased evaporation from its diaphoretic action.

The promptness of the secondary effect is dependent on the size and concentration of the doses given. A very little aconitin is eliminated, as such, from the system, the greater portion being decomposed or burnt up in the system.

The action of veratrum viride is so similar that it does not call for a separate recital.

The indications, then, for the use of these drugs are: To relieve pain, reduce temperature, promote diaphoresis, slow the heart and reduce blood pressure.

As the analgesic properties of the aconite are not manifest until after the appearance of the secondary or toxic symptom of the drug, it is a dangerous remedy to use, and we have such remedies as phenacetin, which is more powerful and less dangerous. As a diaphoretic it does not compare with Dover's powders or pilocarpin. As an agent to slow the heart it is far inferior to digitalis, strophanthus or spartein, as they slow the heart by lengthening the diastole, thus favoring the recuperation of that organ.

Blood letting is probably a more efficient remedy for the lowering of arterial tension than either aconite or veratrum viride, as by this process the toxins are diluted and the volume of blood may be readily restored by saline transfusions.

Finally, I do not believe that we are justified, with out present knowledge of the etiology of disease, to apply remedies solely for the reduction of fever. If the cause of the fever is not known or can not be directly attacked, our efforts should be directed toward supporting the patient, the stimulation of those cells which are potent in the production of antitoxins, etc., or the lessening of oxidation and waste by lowering metabolism; and then if it becomes necessary to reduce the temperature *per se*, hydrotherapy has proven itself to be a safe and efficient agent.

In conclusion, I would say that I do not wish to be understood as saying that aconite and veratrum viride are absolutely useless or prohibitively dangerous, but that there are other remedies which may be used with greater safety and with equally good or better effect.

Should one wish to use aconite or veratrum viride, however, for the primary action, it should be given in exceedingly small doses, well diluted and repeated at short intervals.

DISCUSSION.

DR. F. R. WEBER, Milwaukee, Wis.—There are portions of the United States in which these two drugs are used, but in the northern part of the country they are hardly known in the shops. They are depressants, and that is their limitation. To-day we go back and study the heart more than the old physician used to do—we study the heart as a muscular organ. That grand old physician of Dublin who first introduced the knowledge of the heart muscle as an organ of itself is a man we must consider to-day. The acute diseases, such as typhoid and pneumonia and septicemia, in which it takes weeks and months for the patient to recover, are the diseases in which aconite used to kill. We have toxins which have their effect primarily on the heart muscle; we have degeneration going on which is peculiar to the heart muscle, a degeneration that extends beyond the muscular fiber and goes into the intracellular tissue; it is an interstitial inflammation of the heart which weakens the patient to such an extent several weeks after typhoid or pneumonia that we have to look very carefully to the conservation of the heart. The infectious diseases have a tendency to weaken the heart in the third week of convalescence. If, then, we weaken the heart during any period of the disease what shall become of the heart during convalescence? I think we do harm, not in the stage of action, but when the heart needs all of its recuperative power.

DR. H. A. MOODY, Mobile, Ala.—I am surprised to hear the action of veratrum viride and of aconite described as identical. In the southern part of the United States veratrum is more popular than anywhere else, and we consider that

there is an immense difference between the action of veratrum and aconite. I am tempted to ask the question whether any one here can tell me the fatal dose of veratrum viride. Can any one here point to the record of a death from that so-called poison? Do any of the text-books mention the fatal dose or tell of a death? There may be such, but it has escaped my attention. We have in veratrum viride a depressant which can be given in small doses of two or three drops until the number of pulsations and the force of the heart are reduced and the patient is relaxed and in perspiration. On the other hand, it is a demonstrated fact that you can administer twenty or thirty drops of the same drug hypodermically, and repeat in an hour or two in cases of puerperal eclampsia and yet not poison the patient. That is on record. You can handle veratrum that way, and, therefore, I do not think you should bring it under the same indictment as aconite. I do not consider it the most desirable form of treatment in wasting diseases, and only rise to insist that there shall be a difference drawn between the two drugs.

DR. W. J. ROBINSON, New York—While aconite and veratrum viride are not used as much as formerly, they are very valuable drugs. For instance, in the first stage of sthenic pneumonia there is nothing to equal a few doses of aconite. I make the same objection as does Dr. Moody to classing them together. Aconite is a very dangerous drug, while veratrum has nothing on record against it. In large doses it produces emesis, but that is the worst it does. The value of veratrum in puerperal eclampsia can not be overestimated. I have collected a very large number of cases, and the best results are obtained by giving veratrum in large doses, and this without any bad effects. This question was brought up last year and the same objection was made that these two drugs should not be classed in the same category. While both are cardiac depressants, veratrum is a much safer drug. Gilardoni's clinical and experimental reports show that in veratrum viride we have the safest drug when we wish to reduce arterial tension and keep it reduced for a considerable length of time.

DR. W. W. TOMPKINS, Charleston, W. Va.—I am somewhat of a "middle-of-the-road" man on this particular question. I think, however, that in a large measure we allow our prejudices to influence us in the use of drugs. When I was a student my materia medica teacher did not like aconite because it was used by a homeopath. I believe that aconite is a depressant of the respiratory center more than of the heart. However, it is a mistake to prescribe it in small quantities for any length of time, though it is not my observation that aconite exercises influence for any length of time. I have not looked into the statistics of the mischief done by these two drugs, but aconite poisoning is not infrequent. In the Virginia Lunatic Asylum at Stanton some 12 or 15 patients were poisoned by aconite and died, and it is still an unsolved mystery. On the other hand, I believe each of these drugs has its limitations and its uses. I do not know from experience much about veratrum; it seems to be less frequently used than aconite. I do not know of any fatal cases from its administration. I know those who use it often speak in extravagant praise of its efficacy in certain diseases. I hope the remarks made here will result in a more thorough study of the drug.

DR. C. S. CHAMBERLIN, Cincinnati—Dr. A. B. Isham[1] has reported a large number of cases of eclampsia, pnemococcus infection, convulsions, uremia, carbolic acid poisoning, etc., in which he used veratrum viride as an eliminant hypodermically and in very large doses. If emesis or relaxation did not occur within 15 minutes, the dose was repeated, sometimes a second time. Veratrum viride in large doses produces copious diuresis, emesis and catharsis.

DR. G. D. KAHLO, Indianapolis—It is my understanding that the essayist did not intend to classify the two drugs as having identical effects. In my part of the country both drugs are used to a limited extent, but they have been recommended too indiscriminately. We find, too, that the revised authorities recommend them in smaller doses.

DR. HUGH N. LEAVELL, Louisville, Ky.—Taking into consideration the manner in which Dr. Hill presented this paper, it is not surprising to know that the homeopaths selected this remedy as one on which to build a reputation. I am glad Dr. Hill presented the matter in just that way: "The limitations in the use of" the drugs. I believe we should specialize as much as possible and try to draw a line in each particular case and administer the drug to meet the indications as they arise, taking into consideration any idiosyncrasy shown by the patient. The effect on the blood pressure is well shown, and here we find the best use for aconite and here we get the best results. We must take into consideration the probable absorptive power of the epithelium to which it is applied and we must not lose sight of the fact that it is a very toxic drug and can produce death by its toxic effect on the heart muscle.

DR. SOLOMON SOLIS-COHEN, Philadelphia—When Bartholow came to Philadelphia, twenty-odd years ago, he was very much laughed at because he advocated the use of nitroglycerin; but nitroglycerin has saved a great many lives since Bartholow began to force it on the attention of the profession. There certainly must be some foundation for the general advocacy of veratrum. I agree with Dr. Robinson that there is a time, in the very beginning of sthenic pneumonia, when aconite will do more good than anything else in the pharmacopeia, but we do not often see cases at that time. From the reports quoted by the essayist it would appear that aconite is to be used in the beginning and also at any other time. It is just such careless statements, which he properly reprobates, that mislead us and shock our faith. A routine use I have for aconite—I have not seen it mentioned in the text-books—is in the treatment of many cases of mitral stenosis, in which the heart is pumping tumultuously, trying its best to push the blood through a narrow mitral opening, and yet the effort is ineffectual, the pulse being thin and weak. In such cases it is well to depress the overexalted function to the level of the impaired function in an effort to re-establish physiologic equilibrium. With an overacting heart and a weak and thready pulse, aconite given in very small and successively diminishing doses, continued over a long period of time, has, in my observation, done much good. I have in mind two boys who came under my care at the same time—about twelve years ago. They are now grown, active men, students and teachers. They are not conscious that their hearts are impaired, and for many years have taken no medicine. It is true that iron was administered in conjunction with and after the aconite, and that their general hygiene was regulated.

DR. W. B. HILL—I call attention to the fact that I changed the title of the paper purposely. The subject was chosen for me, otherwise I would have preferred to take one drug only. I did not regard aconite and veratrum viride as dangerous from the viewpoint of acute poisoning, but in just the conditions which Dr. Weber brought out: that the heart is ultimately poisoned, not by the aconite or the veratrum itself, but by the lack of proper blood pressure which is the life of the heart, and therefore I say that those drugs which reduce the blood pressure in disease unnecessarily, while they may have no immediate bad result, must ultimately bring about a diseased condition to a greater or less extent. I did not intend to take up all the uses of these drugs, as that was not within the scope of the paper. The use of veratrum in eclampsia has been spoken of and recommended, but one so doing gave the physiologic reasons for it. The criticism is, although you use it successfully, why did you use it? In eclampsia it is used because of its power to relax and lower the blood pressure. In this connection I will call your attention to pilocarpin which, in addition to lowering blood pressure, causes a greater elimination of retained products than any other remedy. The only trouble with the use of pilocarpin is that it is not used in sufficiently large doses, and yet if a death occurs after the use of pilocarpin the death is attributed

1. "Veratrum Viride as an Antitoxic," Medical News, Jan. 10, 1903.

to pilocarpin when, in fact, the death followed because not enough pilocarpin was used. I was taught to give Norwood's tincture in pneumonia because there was little danger of acute poisoning. I got over that. Opium will relieve the patient by producing a diaphoresis, yet we do not always give opium simply because we want to render the patient more comfortable. So I believe that aconite in the beginning of pneumonia, where the heart has more than double its burden, is contraindicated because of the ultimate effect of the drug on the heart.

NON-TUBERCULAR HEMORRHAGES OF THE AIR PASSAGES.*

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The great vascularity of the mucosa lining the respiratory tract, with its delicate epithelial coverings and its close sympathetic connections through its vasomotor system with the rest of the organism, renders it exceedingly vulnerable to atmospheric conditions and to blood changes and blood pressure from within the organism. The blood vessels supplying this great stretch of mucous membrane are affected by every atmospheric condition, such as thermic and barometric changes, parasitic irritations, dusts and pollens, noxious gases, and all the filth that saturates the atmosphere from many sources. All these forms of irritation disturbing the normal functions of the membrane produce hyperemias, destroy the epithelial coverings and set up morbid processes which weaken the vessel walls and are thus important etiologic factors in the production of hemorrhage. In addition to these atmospheric causes from without, we have the various forms of traumatism to which the anatomic structure of the respiratory tract is exposed, such as concussions, contusions, fractures, dislocations and the many kinds of surgical procedure for the correction of abnormalities, deformities, removal of growths and mechanical irritation of foreign bodies lodged in the respiratory tract. Severe hemorrhages which often result from surgical operations are usually due to some constitutional diathesis or to some anomaly of the circulation in the part operated on.

CONSTITUTIONAL CAUSES OF HEMORRHAGE.

On account of the close reflex relationship between the upper respiratory tract and the pelvic organs it has often been observed that any changes taking place in the latter produce vasomotor changes in the nose and throat. The rapid development of the larynx at puberty is always attended by marked hyperemia. The erectile tissues of the nose show marked engorgement at this period and are especially prone to hemorrhage. Since J. McKenzie, Hack and others have called attention to the close blood relationship of these parts in their physiologic and pathologic changes, we are enabled to treat many cases of hyperemia of the nose and throat with a greater degree of success.

Fleiss has shown by an extensive series of investigations in the gynecologic clinic of the University of Berlin that there are certain points on the anterior extremity of the middle and inferior turbinate bodies, designated by him the "genital areas," through which influence can be exercised in pathologic conditions of the female pelvic organs. By cocainizing the genital areas the pains which accompany or follow the menstrual flow can be relieved, and labor pains can be reduced to a minimum, while by cauterizing these areas a permanent cure of many cases of dysmenorrhea may be achieved.

The writer has had an opportunity of observing in several cases the effect on dysmenorrhea of treatment administered through the genital areas of the turbinates, and also two cases of vicarious hemorrhage, one from the erectile tissues of the nose and the other from the larynx, as the result of sudden arrest of the menstrual flow. There are many interesting cases reported of vicarious hemorrhage from the nose and throat in the literature of the subject. The case of Alibert, in which sudden stoppage of the menstrual flow caused a fatal hemorrhage from the nose, and the case of Kussmaul, quoted by Bosworth, in which there was a periodical nasal hemorrhage in a woman with total absence of uterus; also one by Fricher of a girl of 19 who had never menstruated, but who had violent hemorrhages from the nose at regular intervals of six weeks, which finally proved fatal.

There are a few reports of cases of vicarious hemorrhage due to the arrest of long existing bleeding from rectal hemorrhoids, and from sudden checking of the functions of skin and the cure of certain skin diseases. Bleeding from the nose or larynx during pregnancy is a not uncommon occurrence, probably due to the pressure of the uterus on the large abdominal veins. All of the diseases of the liver, spleen, kidneys, heart and brain which obstruct the return flow of the blood, produce engorgement in the respiratory tract and tend to produce hemorrhage. "We often see persistent hemorrhage from the nose and larynx in cirrhosis of the liver and in renal disease, and it is often associated with the cardiac disease in the venous stases due to failure of compensation in mitral diseases and in aortic insufficiency." (Friedreichs.)

Edgren says that hemorrhages of the air passages are frequent in the presclerotic period and, in the elderly, point to incipient arteriosclerosis. In these cases the bleeding comes on without apparent cause, or it may follow any violent emotion. Any increase of blood pressure is liable to cause rupture of the weakened vessel walls in this disease. The association between the veins of the interior of the skull and the venous sinuses of the nose is so intimate that all the congested states of the cerebrum and meninges are liable to produce epistaxis. Tracheal hemorrhages are comparatively rare. We have an occasional case of fatal hemorrhage from this source due to rupture of an aneurism of the aorta into the trachea. This is due to ulcerations between the rings from pressure of the aneurismal sac. Five cases of tracheal hemorrhage following influenza are reported by Donelan.[1]

HEMORRHAGE DUE TO THE ACUTE FEBRILE DISEASES AND HEMORRHAGIC DIATHESIS.

Hemorrhages occur as a premonitory symptom or as a concomitant of many of the epidemic fevers, such as typhoid and remittent fever, scurvy, diphtheria and the exanthemata. The cause of the hemorrhages in these fevers is yet obscure. They usually occur from the respiratory tract in the initial stages of these affections, and it is the accepted opinion among pathologists that they are due to yet undiscovered changes in the blood and blood vessels of toxic origin.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Laryngology and Otology, and approved for publication by the Executive Committee: Drs. George L. Richards, O. Joachim and G. V. Woollen.

1. Jour. of Laryngol. and Otol., January, 1901.

Nichols claims that in some cases the appearance of hemorrhage corresponds to secondary infections and in others to the cachectic state to which patients are reduced. In the early stages of these affections we find the membrane of the nose and throat intensely hyperemic, and in the later stages a breaking down of the epithelium and vessel walls, with small ulcerations and extravasations of blood.

The hemorrhages of typhoid fever, according to Friedreich, show a predilection for the septum, but may occur in other parts of the mucous membrane. Superficial ulcerations causing hemorrhages are very common in certain regions of the pharynx and larynx. They are commonly found on the faucial pillars, the free border or laryngeal surface of the epiglottis, the aryepiglottic folds, and often occur below the glottis. They are rarely seen on the vocal cords.

Millet observed: "Epistaxis associated with malarial infections is intermittent or periodical, and may be controlled by quinin."

Of all the predisposing causes of hemorrhages hemophilia occupies the first place. It is the "bête noire" of the laryngologist. There are but few of the operators in this department of surgery who have not had sad experiences with this class of patients known as "bleeders." Reports of fatal hemorrhages from excision of the tonsils and adenoids in patients unsuspected of having this predisposition come up before almost every meeting of laryngologists.

The cause of this diathesis is yet undetermined. Statistics show that it has a decided preference to lay its mark on the males. Among the "bleeder" families the females are usually exempt. Among the spontaneous hemorrhages due to hemophilia, epistaxis is by far the most common form. According to one authority, among 236 hemorrhages of various kinds 122 were from the nose, and Eichhorst says: "These hemorrhages are usually preceded by perversion of the senses of taste and smell. One patient could smell, another taste, the approach of his hemorrhage." Ecchymosis and submucous hemorrhages in the larynx, as well as ulcerations of the pharynx and larynx, are very common in purpura hemorrhagica.

SYPHILIS AS A CAUSE OF HEMORRHAGES.

Syphilis is not regarded by most of the authorities on the subject as a frequent cause of hemorrhage. In the primary and secondary stages hemorrhages are very rare. In the tertiary and hereditary forms they are much more frequent and are often very severe. It would seem that syphilis would play a most important rôle in the production of hemorrhage from the respiratory tract on account of its predilection for these parts and the destructive changes which are so often wrought here by this disease. It seems that the ulcerative processes rarely invade the blood vessels in syphilis.

LOCAL CAUSES.

Among the local causes of epistaxis, deflections of the septum should occupy first place. The irregularities on the deformed septum expose the superficial capillaries to many forms of irritants in the air current which denude the vessel walls and thus bring about more or less violent attacks of hemorrhage (Bosworth).

The various forms of neoplasms of the nose, pharynx and larynx, such as fibroma, sarcoma and carcinoma, are often the source of most alarming and difficult hemorrhages to control.

THE MOST FREQUENT LOCATIONS.

"Since the time of Valsalva, a point on the anterior portion of the cartilaginous septum has been known as the most common site of hemorrhage from the nose." Bleeding from this point is rarely dangerous, and is usually easy to control. In hemophilia and purpura the bleeding comes from various points on the mucous membrane. In profuse hemorrhage the bleeding point is difficult, and sometimes impossible, to discover. The ethmoidal veins are often the source of violent hemorrhage, probably on account of their close connection with the cerebral circulation. Other points on the posterior ends of the lower turbinates, the venous plexus in the vault of the pharynx and the venous plexus at the base of the tongue, are frequent seats of hemorrhage. Bleeding from the larynx is comparatively rare, and is not often of a dangerous character from the loss of blood. "Laryngeal hemorrhages are dangerous only when they are beneath the mucous membrane, thus producing hemorrhagic edema and impending asphyxia." They may easily be mistaken for hemorrhage from the lungs or hematemesis.

PROGNOSIS.

Bleeding from the nose is rarely fatal. In many cases it seems to be Nature's method of relieving overdistended blood vessels. There is no doubt that many cases of cerebral apoplexy are averted by nasal hemorrhage, and it is quite common for some patients to experience immediate relief from a severe congestive headache by a free nose bleed. Spontaneous hemorrhages are more dangerous in young children and the aged on account of the friability of the vessel walls. Fatal hemorrhages of the upper respiratory tract are reported in children under a month old from hereditary syphilis. "Swoboda reports four fatal cases of nurslings from hemorrhages of the upper air passages. In all of his cases the bleeding had not appeared externally, but had passed by the nasopharynx into the stomach." (Sajous' Annual.)

J. N. McKenzie says: "Persistent and recurrent epistaxis is much more frequent between the ages of 15 and 25 years." The greatest number of fatal hemorrhages come, perhaps, from the removal of the tonsillar and adenoid tissues among those of the hemorrhagic diathesis and those with anomalies of the circulation in these tissues.

DIAGNOSIS.

The importance of a correct diagnosis in hemorrhage of the upper air passages can not be overestimated. Every mechanical means should be exhausted in determining the exact location of the bleeding point. Modern apparatus has been so perfected for diagnostic purposes that no one is justified in assuming to give an opinion in these cases who has not availed himself of the best apparatus and acquired the best skill possible in their use. The laryngeal mirror and palate retractor are invaluable aids in locating and differentiating diseases of the whole respiratory apparatus, and in many cases of the digestive apparatus as well.

ILLUSTRATIVE CASES.

Hemorrhages of the larynx, the nasopharynx, the tonsillar tissues, and the region about the base of the tongue are often mistaken for pulmonary hemorrhage, or hemorrhage of the stomach. The following cases in the writer's experience would tend to emphasize the importance of a patient effort with these instruments (the laryngoscope and palate retractor) in the search for the bleeding point.

CASE 1.—A young attorney of splendid physique called on me for what he supposed were hemorrhages from the lungs. He had been spitting blood for two or three weeks. I could discover no evidence of lung disease by the most careful examination. There was slight hyperemia of the larynx, but no sign of hemorrhage from that source. The anterior ends of the turbinate bodies were considerably engorged, producing occlusion of the nares. The first examination of the post-nasal space, on account of the patient's excessively sensitive reflexes, was unsuccessful. On questioning him he most skilfully evaded any history of syphilis. I remained in darkness as to the source of hemorrhage until I succeeded in examining the post-nasal space with the use of the palate retractor. The posterior portion of the septum was completely necrosed, the ulcerated process having extended to the veins in the vault of the pharynx. The hemorrhage that had persisted and was apparently from the lungs soon yielded to syphilitic treatment.

CASE 2.—I obtained the following history from Dr. Graham of Indianapolis:

"I was called to see Mr. E., aged 24, at St. Vincent's Hospital, Oct. 10, 1902. He nad suffered a profuse hemorrhage from the mouth and nose as he was about to alight from a train at the Union Station. I obtained the following history: The patient, so far as he knew, had enjoyed good health until two months previous, when, while in a New York theater, there occurred without any premonition whatever a hemorrhage, the blood flowing from both the nose and mouth. He was removed to the New York Hospital, and one week later suffered a similar hemorrhage. He stated that it became necessary for the physicians to resort to intravenous injections of salt solution. . . . His case was there diagnosed as one of gastric ulcer, and laparotomy was performed for the same. One week later a third hemorrhage occurred. It was one hour after the fourth hemorrhage occurred that I was called to see this patient. It was stated that this hemorrhage filled a large cuspidor, and I am inclined to believe that this statement is not an exaggeration because of the hemorrhages which I saw at a later period.

"The diagnosis of gastric ulcer was not clear to me in this case and yet I placed my patient at complete rest, withheld all food by the mouth, and placed an ice bag over the epigastric region. . . . Dr. Page was called in consultation, and will give the further history and treatment of this most interesting case. I might add that I wrote Dr. J. H. Lewis, hospital surgeon at the New York Hospital, regarding this case, stating in my letter that I did not think there were any signs or symptoms of gastric ulcer, and received the following letter in reply:

" 'Mr. E. was a patient at this hospital and was operated on, as he stated to you. His stomach was opened by a two-inch incision in the anterior wall very near the pylorus. A bleeding surface one-half by three-fourths of an inch was found about the middle of the anterior wall and united by mattress sutures of chromated gut. It was thought it had probably been caused by instrumentation, and was not the cause of the previous hemorrhages. Apart from this no ulcer was found. One week after the operation he vomited about one quart of blood. He was discharged in fair condition with the diagnosis still in doubt. One remarkable feature at the operation was profuse and persistent bleeding in the wound through the abdominal wall.' "

I was called in consultation by Dr. Graham to locate, if possible, the seat of hemorrhage in this case. He had suspected that the bleeding was from the throat. Owing to the nervous and exhausted condition of the patient from the great loss of blood, and to the narrowing of the isthmus of the fauces from adhesion of the anterior pillars of the fauces to the dorsum of the tongue, I found it very difficult at the first examination to get a satisfactory view of the larynx and post-nasal space. We put the patient on strychnia and after a few days' training I succeeded in getting a good view of the throat in the laryngeal mirror. I discovered at the base of the tongue two deep fissures about an inch and a half long, extending from either side of the epiglottis and cutting the venous plexus about the base of the tongue, coming together and forming an acute angle about an inch above the free border of the epiglottis. The tissue included in this triangle about the root of the tongue was considerably excavated. In examining these fissures with a probe a profuse hemorrhage was started and I had to resort to the suprarenal extract and chromic acid to arrest it. I was satisfied from this examination that this had been the seat of the previous hemorrhages which had so greatly exsanguinated the patient. On discovering these ulcerated fissures and the adhesions between the pillars of the fauces and the tongue (which caused the patient to talk tongue-tied), I concluded that syphilis was the cause of the trouble, although there was absolutely no history to confirm it. I placed the patient on antisyphilitic treatment and applied chromic acid and later nitrate of silver to the ulcerated surfaces. The hemorrhages ceased at once and there was a rapid gain in strength and weight from the start.

CASE 3.—Miss C., aged 23 years, a singer, called on me in June, 1895, for what she supposed were pulmonary hemorrhages. She said the sputum had been examined and that her physician found tubercle bacilli in abundance, and ordered her to Colorado at once. Laryngoscopic examination revealed a small angioma on the left vocal chord surrounded by dried blood. I cleansed the larynx with the spray and could see that the blood vessels about the small growth were dilated and partially denuded of epithelium. She said her hemorrhages usually came on after singing. I requested her to sing, and could detect the blood flowing from the growth and the dilated vessels. I destroyed the distended vessels and the growth with the electro-cautery and there was never any further hemorrhage. The subsequent history of this case and the lack of abnormal temperature, as determined by several tests with the thermometer, convinced me that this patient never had tuberculosis, notwithstanding that tubercle bacilli were reported to have been found in the sputum.

TREATMENT.

It is the intention of the writer to only refer in a few words to some of the numerous methods of treating hemorrhages of the respiratory tract. With our modern method of illuminating the air passages the bleeding point should be located before any efforts at plugging or hemostatics are resorted to for the checking of the hemorrhage. In only exceptional cases where the bleeding is from several different points on the membrane and in those cases where gagging and vomiting render the parts inaccessible should we try to check the flow of blood temporarily until its source can be determined.

The cocain spray and suprarenal extract have proved to be invaluable aids in checking the flow of blood and diminishing the reflexes, thus enabling us to make a diagnosis. The ordinary surgical measures for checking hemorrhages in other parts, such as the use of the ligature and artery forceps, are rarely of service to the laryngologist. Probably in no department of surgery is the operator so handicapped in the treating of hemorrhages as in the nose and throat. Large blood vessels emerge from bony or cartilaginous walls to be distributed to parts accessible only by the most delicate instruments and visible only by artificial lights. To cut down on a vessel and ligate it is out of the question in the majority of cases. In a few cases this has been done successfully in the violent hemorrhage that sometimes follows the removal of the tonsils or adenoids. Keane reports two cases of ligation of the external carotid artery for severe hemorrhage following slight operations in the nose and pharynx. He says this is a simple operation, and every nose and throat surgeon should be prepared to perform it when life is threatened.

For the ordinary hemorrhages of the respiratory tract our resources are ample and effective. Suprarenal or adrenalin extract has proved invaluable in the writer's operative work.

Some laryngologists claim that it is deceptive in that it is apt to be followed by intense reaction and secondary hemorrhage several hours after an operation.

GENERAL SURGICAL ANESTHESIA.

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(Concluded from p. 1403.)

SELECTION OF AN ANESTHETIC.

In order to receive favorable comparative consideration, an anesthetic should possess these qualities: Immediate and remote safety; least disagreeable to take; best calculated to quickly produce and maintain muscular relaxation, followed by the minimum of ill effects, as vomiting, depression, respiratory troubles, renal disturbance; minimum influence on the question of hemorrhage; best adapted to the individual case. In the vast majority of cases the choice lies between ether and chloroform. It has been proven beyond reasonable doubt that, all things considered, chloroform is more dangerous than ether, both immediately and remotely. The immediate safety (during administration) is so overwhelmingly in favor of ether that I do not hesitate to assert that those who hold to the contrary can not be fully acquainted with the facts. There are really very few contraindications to the use of ether when skilfully administered by the "open" method. It is not strongly contraindicated, even in ordinary cases of chronic nephritis, nor in any but acute or severe bronchial affections. In the presence of asthma or of acute bronchial affections, marked arteriosclerosis or atheroma, ether is more dangerous than chloroform, as a rule. Atropin will, to some extent, prevent the danger in the first two conditions, and amyl nitrite or nitroglycerin in the last two. Although formerly (for ten years) a chloroform advocate, I have learned from experience, careful observation, and the study of recent investigations, to use chloroform only where it is especially indicated—and that is extremely seldom. The safety margin between sufficient ether for anesthesia and the lethal dose is much greater than with chloroform. Ether is much safer for indiscriminate use, in that most physicians who administer anesthetics are relatively unskilled in their use. In order to reduce the bad effects of an anesthetic to the minimum, it must be skilfully administered; and when the anesthetic is badly given, the dangers from chloroform are very much greater than those from ether. Ether kills slowly, generally by its effects on respiration, and usually gives ample warning of danger, since the heart continues to beat long after respiration ceases. Chloroform kills quickly, generally by its effect on circulation, and is very likely to afford no warning of danger. Ether is safer in healthy persons than in the weak and prostrated, while chloroform is often as dangerous in the vigorous as in the debilitated. Treatment usually promptly overcomes unfavorable symptoms from ether, and often does no good in those from chloroform. Public opinion in most parts of this country is overwhelmingly in favor of ether, as compared with chloroform; hence, if an accident happens with ether the surgeon is much more likely to escape blame. As mentioned by Treves,[22] the objection urged against ether, that it produces venous engorgement, and, consequently, too much oozing from the field of operation, is not well founded, the question being chiefly one of administration.

General Statistics.—The statistics of deaths from anesthetics can not be relied on as indicative of the actual dangers encountered. They represent the deaths only, and not the narrow escapes. Moreover, in this country, and in some others, it is probable that not half the deaths from anesthetics are reported.

The statistics presented at the Thirtieth German Surgical Congress, Berlin, May, 1901, credit chloroform with a death rate of one in 2,023; ether, one in 5,090; ethyl bromid, one in 5,228.

Gurlt's statistics up to 1893, based on 157,815 war cases, give a death rate for chloroform of one in 2,899; chloroform with ether, one in 41,181; ethyl bromid, one in 4,588; pental, one in 199. No deaths from ether or A.C.E. mixture reported.[23]

A. I. Bouffleur[24] quotes statistics of over 1,000,000 chloroform and over 500,000 ether anesthesias, in which the average chloroform mortality is one in 3,355, and the average ether mortality one in 16,768.

In considering statistics, we find that the personal equation is of the greatest importance. One man has 15,000 chloroform cases, with only one death, while another has three deaths in less than 1,000 cases. One selects his cases for chloroform, while another gives it indiscriminately. One administers an anesthetic carefully by the open method; another gives it carelessly by the closed or the smothering method. It is notable that by far the greater number of deaths are reported from localities where chloroform and pseudo-scientific, complicated inhalers are extensively employed. I quote from an article in *The British Medical Journal* of the late '90's: "In a certain institution in Great Britain, in the course of a recent year, there were, out of some 3,000 or 4,000 administrations, no fewer than twelve fatalities from chloroform." Taking the higher number of anesthesias, this means one death in every 333 administrations.

German statistics during the decade 1890 to 1899, show deaths about as follows:

Ether, one in 7,000; chloroform, one in 2,000; ethyl bromid, one in 4,000; pental, one in 2,000; chloroform-ether, one in 9,000; A.C.E., one in 6,000.

Ziegler's statistics give the death rate of chloroform as one in 1,900 and of ether as one in 26,000.

Chaput gave it as one in 2,000 and one in 13,000, respectively.

Foy's statistics, based upon 877,507 chloroformizations and 314,738 etherizations, give a mortality of one in 4,301 and one in 14,987, respectively (Sajous' Annual).

Poncet had but one death in 29,000 ether anesthesias. He believes the danger is from asphyxia.[25]

In the presence of postnasal adenoids, especially if hypertrophy of the faucial tonsils also be present, I consider chloroform extremely dangerous. Nitrous oxid—with the patient in the recumbent posture—is the best anesthetic for these cases, and ether, to the stage of primary relaxation, the next best.

Many of the sudden deaths under anesthesia, especially of children and young persons, have occurred in the presence of a persistent, or even hypertrophic, thymus. In most of such cases the spleen and tonsils are unusually large, and enlargement of the follicles at the base of the tongue is constant (L. Laquer, Strassburg).

22. Practitioner, London, October, 1896.

23. Practical Surgery, Senn, 1901.

24. Chicago Medical Recorder, May, 1897.

25. Progressive Medicine, December, 1902, p. 78.

Preparation.—All patients who are to be subjected to anesthesia should, if possible, have the benefit of at least two or three days' preparatory treatment and observation. The organs of elimination—the bowels, the kidneys and the skin—should be put in the best possible condition. The urine should be examined carefully for evidences of nephritis or diabetes, so that precautions may be taken where necessary. The condition of the cardiovascular system and of the lungs should be carefully determined, and the patient's habits, as to alcohol, tobacco, and narcotics, inquired into. In patients with any pronounced symptoms of anemia a blood examination should be made. When the percentage of hemoglobin is under 40, no operation should be performed save in great necessity, on account of the destructive action of anesthetics on the erythrocytes. The food for as long a time as possible before the operation should be of the most nutritious and easily digested kind suitable for the patient, and the feeding should be rather forced than otherwise, especially in delicate persons, up to the day preceding the operation, in order to bring the vitality to the highest available point, thus enabling the patient to better withstand the shock of the operation and the anesthetic. The day preceding the anesthesia the diet should be nutritious and light—either liquid or semiliquid. No solid food or milk should be given within several hours of an anesthesia, but water should be allowed to within say two hours preceding it; and a cup of beef tea or one of coffee, or both, taken from one to two hours before the administration, are valuable for their stimulating and sustaining effects. The system should be well supplied with fluids before and after anesthesia. "All the functions of the body are carried on in a fluid medium." Without abundance of this medium, we may not expect as rapid recovery from the effects of the anesthetic and operation as can be obtained with plenty of it.

W. A. Briggs[26] advocates the use of oil of peppermint or menthol preliminary to etherization. About a dram of the oil or of a 50 per cent. alcoholic solution of menthol is sprinkled in the inhaler and the patient allowed to inhale freely for three minutes, then etherization is pushed as rapidly as is consistent with safety. The seeming advantages, as compared with the usual method, are: 1. The anesthesia may be more easily and quickly induced, and more smoothly maintained; 2, entire absence of coughing and suffocation, and comparative freedom from nausea, vomiting and retching; 3, suppression or marked abbreviation of the period of excitement; 4, profounder first anesthesia, which permits minor operations with greater certainty; 5, less post-anesthetic nausea.

During the past few months this method has been followed in my practice with excellent results. It deserves extensive trial. In etherizing a 4-year-old boy, recently, the transition from peppermint to ether was unnoticed, and there was no stage of excitement.

Administration.—It is of the utmost importance that before beginning the administration of an anesthetic the anesthetizer gain the confidence of the patient, and thus be enabled to allay fears which have been conjured up perhaps days or weeks in advance. In persons of average intellect and education the difficulties are not generally great, but in the ignorant, especially if very nervous or hysterical, it is occasionally impossible to allay the apprehensions of real or imaginary dangers. I find that the greater the fear preceding anesthesia, the greater the danger during the narcosis. It is best to anesthetize the patient in a room free from noise, and do no talking, excepting to the patient, while inducing the narcosis; and the anesthetizer should invariably have someone within easy reach to aid him in case of emergency. There should be as little disturbance and lifting of the patient as possible after the anesthesia has begun, so as to avoid disturbing the anesthesia in its early stages. During the past two years I have followed the custom of William J. and Charles H. Mayo of Rochester, Minn., of having patients anesthetized in the operating room on the operating table.[27] I then have them under my own eye from the beginning of anesthesia, and there is no disturbance or loss of time due to changing from cart to table. It is seldom that quiet, almost noiseless breathing can not be maintained throughout a narcosis. The yielding of the jaw is a trustworthy indication of the approach of surgical narcosis. If the jaw is rightly managed the gag and the tongue forceps will very seldom be needed. When the forceps are used it is seldom necessary to lacerate the tongue or to nearly amputate it by pulling it constantly downward across the lower incisors. The administration of the anesthetic, whether ether or chloroform, should begin gradually.

There are two ways of avoiding overdosage, which are too often neglected: 1, expedition in getting the patient on the table and ready for the surgeon after narcosis is complete; 2, as rapid operating as is consistent with thoroughness and safety. In fewer words, avoid giving the anesthetic a moment longer than necessary.

Danger Signals.—There is no one signal that is an infallible early guide. The pupillary reflexes are the best single guide to impending danger. A rapidly dilating pupil means danger, and a fixed, dilated pupil means extreme danger. A contracted, immobile pupil usually indicates safe surgical anesthesia; a pupil oscillating between contraction and dilation, diminishing anesthesia. The pupil is sometimes modified by the nature of the operation, as by manipulation of extremely sensitive tissues, or by suddenly changing the patient's position. The color of the face, lips, ears, and nose should be constantly observed. An ashen hue of any of these parts should create apprehension. Blueness of the skin is generally due to asphyxiation, and is much less dangerous than abnormal paleness, which generally indicates gradual poisoning of the circulatory mechanism, including the center in the medulla. To emphasize these conditions, Wm. Mitchell Banks[28] speaks of the "blue" man and the "white" man. The latter is in great danger. A. P. Ohlmacher[29] maintains that in the condition of lowered vital resistance known as the lymphatic constitution there is a strong tendency to sudden death in anesthesia. The respiration and pulse should be watched in all cases with the greatest care, no matter what anesthetic is being administered. The reflex rigidity occasioned by manipulation of sensitive tissues often demands temporary withdrawal of the anesthetic, whereas the temptation is to "crowd" it. Likewise, great vigilance should be exercised by the administrator when the surgeon is severing large nerve trunks.

Respiration during anesthesia should, as a rule, be easy and quiet. Snoring or stertor suggest either partial obstruction or too much anesthetic. When the epiglottis drops back it is necessary to introduce the finger into the mouth and lift it away from the glottis. If these maneuvers fail, artificial respiration by the

26. Occidental Medical Times, April, 1902.

27. Alice Magaw, "The Administration of Anesthetics," St. Paul Med. Jour., January, 1902.

28. THE JOURNAL Am. Med. Assn., Dec. 7, 1901, vol. xxxvi.

29. Philadelphia Med. Jour., March 10, 1900.

Sylvester method should be instituted. If then no air enters the lungs, the trachea should be opened. If the heart becomes weak during the anesthesia, it is well to inject subcutaneously a cardiac stimulant, as nitroglycerin, digitalis, spartein, strychnin. If amyl nitrite be given, remember it is only the temporary vasomotor dilator action that is wanted. If pushed beyond this not easily determined limit it may cause cardiac paralysis. The head-down position, by determining more blood to the circulatory center, aids in strengthening a heart which has become gradually weak.

TREATMENT OF EMERGENCIES.

Methods of treating emergencies may be thus summarized:

1. Reflex excitation of respiration by external application—for example, cold or cautery to the epigastrium, ammonia vapor to the nostrils.
2. Reflex excitation of respiration by mechanical means—as rhythmic traction on the tongue (Laborde), or divulsion of the sphincter ani.
3. Artificial respiration. Tracheotomy (when other means fail).
4. Measures counteracting circulatory failure—like posture or rhythmic compression of the chest or abdomen.
5. Cardiac stimulants—as amyl nitrite, nitroglycerin, strychnin, atropin, spartein, aromatic spirits of ammonia.
6. Bleeding from a large vein to relieve the over-distended right heart (when other means fail).

In the majority of cases oxygen, either pure or atmospheric, is the best resuscitant; but in some instances well-selected drugs are beneficial.

It should be kept in mind that in the first and second classes the nerves must be sufficiently alive to convey stimuli.

VOMITING DURING AND AFTER ANESTHESIA.

Serious or persistent vomiting, either during or after anesthesia, can nearly always be prevented by right management of the patient and of the anesthesia. In the first place, the patient must be properly prepared for the administration, and an anesthetic selected which is suitable for the particular case in hand.

Postanesthetic vomiting can be reduced almost to insignificance, if the patient is properly prepared for the anesthesia; if the anesthetic be carefully selected and skilfully administered; if the patient be transferred from the operating room to bed without much jarring, and kept perfectly quiet and free from disturbance in bed; and, finally, by freeing the stomach of accumulated mucus or bile. During the past five years I have practiced gastric lavage, as suggested by I. P. Gunby of Sherman, Texas.[30] Physiologic saline solution may be used, and from one to two quarts is usually sufficient. A medium-sized or small soft rubber stomach tube is introduced, through the nose, as soon as administration of the anesthetic is suspended, and the stomach washed while the dressing is being applied. During the procedure the patient's body should be sufficiently inclined head downward to prevent fluid from entering the trachea. This procedure aids materially in reducing vomiting to insignificance.

Another method for the prevention or control of postanesthetic nausea, introduced by Mackenrodt, is the inhalation of vinegar. It is supposed to be equally efficacious after ether or chloroform. After trying it in several hundreds of cases, I have concluded that this method is of little value.

30. Medical News, Jan. 21, 1899.

DEDUCTIONS.

1. It is not justifiable to employ any one anesthetic exclusively. The safest anesthesia depends on: 1, the choice of the anesthetic best adapted to the case in hand; 2, the best technic of preparation, administration and general management; and, 3, a skilful anesthetizer.
2. The recent advance in our knowledge of local and neuroregional analgesia has materially narrowed the field of general anesthesia, but the local method can not supercede the latter.
3. Cases for anesthesia should be divided into three groups: 1, cases in which the indications for local anesthesia are absolute; 2, cases in which the indications for general anesthesia are absolute; and 3, doubtful cases. If in doubt, use the general anesthetic.
4. The mere fact that an operation can be performed under local anesthesia is not sufficient justification for its employment. As a rule, better work can be done under general narcosis, and, especially in septic cases, postoperative complications are less likely to occur after a skilfully conducted general anesthesia than after local.
5. Both ether and chloroform exert a destructive effect on the erythrocytes and reduce the amount of hemoglobin (chloroform having the greater destructive action), hence, in anemic patients at least, the blood should be examined before administering an anesthetic. When the percentage of hemoglobin is below 40 an anesthetic should not be given when it can be avoided. Even with a hemoglobin percentage of 50 the danger is great.
6. Chloroform tends to cause fatty degeneration of the heart, liver and kidneys, while ether has very little effect in this direction. On the kidneys the effect of ether properly administered is usually transient; that of chloroform is likely to be more serious and prolonged.
7. Ether is a respiratory depressant, and usually exerts its bad effects primarily on the respiratory system. Chloroform is a circulatory depressant, and usually exerts its bad effects primarily on the circulatory system.
8. Nitrous oxid is a true anesthetic, and can be employed for prolonged operations (where complete muscular relaxation is not essential) when administered with certain proportions of oxygen, either pure or atmospheric. Its use is satisfactory only in skilled hands.
9. Ethyl bromid and ethyl chlorid are convenient for primary anesthesia and for short operations. They are probably less dangerous than chloroform. Both are circulatory and respiratory depressants.
10. Chloroform can not be made as safe as ether by admixture with other drugs, although the danger in its administration may be somewhat reduced by this means.
11. As a rule, strychnin or other heart tonic is indicated in the debilitated or preliminary to chloroformization, and morphin and atropin preliminary to etherization. Oxygen and posture are the best resuscitants.
12. Ether produces less circulatory depression than chloroform. It causes dilation of the arterioles and increased capillary circulation, thereby insuring a good blood supply to the circulatory and respiratory centers and to the heart muscle; consequently these systems are in less immediate danger than with chloroform.
13. On account of the reduction of body heat by anesthetics, they should be administered in a warm room; and the patient should be protected from loss of heat by proper covering of the body, by keeping it dry so

far as practicable, and by application of artificial heat when necessary. The temperature of the operating room should not be above 85 F. In changing the patient from operating room to bed, beware of cold halls or drafts.

14. Compression of the phrenic nerve will, if properly managed, usually control retching and kindred symptoms occurring during narcosis.

15. Postanesthetic nausea is best prevented by preparation and after-treatment which favor physiologic tonus, with especial reference to the emunctories, and by gastric lavage at the termination of anesthesia. Troublesome vomiting is in most instances quite unnecessary, no matter which anesthetic has been given. Chloroform is likely to cause more persistent nausea and vomiting than ether.

16. Patients should be well fed with easily digested and non-bulky food to within a few hours preceding anesthetization, and should be allowed water to within 2 or 3 hours of it. This plan reduces shock, favors elimination of the anesthetic and other waste products without undue irritation of the emunctory organs, and the patient will not suffer much from thirst and nausea. For the same reasons water should be given as liberally as practicable after anesthesia.

17. The danger from hemorrhage is no greater with ether than with chloroform, if as great, since the bleeding which occurs from the effects of ether is primary and is more certainly provided against; while the circulatory depression and vasomotor constriction due to chloroform to a great extent prevent primary bleeding and lead indirectly to later hemorrhage.

18. The safety margin between sufficient chloroform for anesthesia and the lethal dose is much narrower than it is with ether.

19. Anesthetic mixtures are in general less safe than the "straight goods." It is impossible to know the relative proportions of the different components of a mixture that the patient actually inhales; and when accidents occur the anesthetizer is hampered in his treatment by not always knowing which constituent is causing the trouble.

20. Ether-oxygen narcosis is safer than ether alone, by the "closed" method, but the oxygen gas is superfluous in most cases where ether is properly administered.

21. The ethyl bromid-ether method is a time saver, but is not safe. Ethyl chlorid-ether is probably still less safe.

22. Morphin-ether-chloroform anesthesia is of positive advantage in operations about the face, where it is difficult to maintain surgical narcosis by the ordinary means. Souchon's special inhaler is a valuable adjunct in these circumstances.

23. As a rule successions of anesthetics should be avoided, with the exception of nitrous oxid-ether.

24. Ether given alone is especially dangerous in the presence of arteriosclerosis, and chloroform especially so in anemia and where there are degenerative changes in the vital organs.

25. Partial or "talking" anesthesia is best in some cases, but should be avoided in prolonged operations unless taken quietly and with apparent abolishment of pain sense.

26. Primary ether narcosis stands next to nitrous oxid for short operations.

27. Hypnotic anesthesia should be employed only exceptionally, if at all.

28. In a patient liable to recurrent insanity, anesthesia is dangerous, but not so in one already insane.

29. Paralysis following anesthesia is almost always a pressure paralysis and is preventable.

30. In myocardial disease all anesthetics are especially dangerous, while in purely valvular disease they usually create but little disturbance. Ether is the anesthetic of choice, and is safer for many major operations in these cases than local anesthesia. Asphyxiation should be especially avoided in administering an anesthetic in the presence of heart disease. The use of chloroform is entirely out of question in myocardial disease.

31. In the plethoric and the obese, especial care must be exercised in the selection and administration of anesthetics, the chief danger encountered being from respiratory disturbance (often due to turgescence and consequent swelling of the boundary parts of the upper air passages).

32. Ether is the best anesthetic in obstetric practice. Chloroform is more dangerous to both mother and child.

33. Rectal etherization is feasible, but too dangerous to be employed in a routine way in any class of cases.

34. Any anesthetic, but especially ether, should be given with the greatest caution in the presence of special susceptibility to acute bronchial affections. Great care should also be exercised in the presence of asthma, and chloroform is in some cases preferable to ether.

35. Patients with peritonitis require a dangerous degree of anesthesia to produce relaxation of the abdomen. The anesthetizer should be extremely careful about "crowding" the anesthetic to overcome the rigidity brought about by the manipulation of sensitive or inflamed tissues, since handling such tissues often causes a dangerous degree of shock.

36. The best type of inhaler, for both chloroform and ether, is one made on the principle of the Esmarch chloroform mask.

37. The tongue forceps and the gag are seldom required, and the latter often endangers life, as ordinarily used. The right management of the jaw during narcosis will nearly always render these instruments superfluous.

38. The anesthetizer should gain the confidence of the patient as to his carefulness and ability, so that the mind may be at rest on these points. Patients who greatly fear anesthesia are the ones liable to cause the anesthetizer the most trouble.

39. The patient should be kept as free as possible from noise and other disturbances during the induction of anesthesia.

40. "Crowding" an anesthetic is usually not justifiable, as it adds materially to the danger. The necessity for "crowding" is the chief objection to the use of the nitrous oxid-ether method as ordinarily carried out.

41. No time should be lost in getting the patient in the hands of the surgeon after narcosis is complete; and the surgeon should operate as rapidly as possible consistent with good work.

42. In administering an anesthetic the dose should be regulated by the effect. The elaborately constructed pseudo-scientific apparatus for accurately measuring the dose is dangerous, cumbrous and expensive.

43. When chloroform is used, administer it slowly, especially in the early stages of anesthesia. The amount of anesthetic needed for the average subject varies with climatic conditions.

44. The pupillary reflexes constitute the best guide to the presence or absence of surgical anesthesia, and the best danger signal. Touching the cornea with the finger to determine the presence or absence of surgical anesthesia is unwarranted. The anesthetizer should watch

carefully the pupils, pulse, respiration, and the color and condition of the skin, depending on no single symptom as a danger signal. The patient should be carefully watched from the beginning of the anesthesia until fully restored to consciousness.

45. When anesthetics are properly administered the patient seldom struggles. Noisy respiration during anesthesia should be the exception, as it generally means faulty management.

46. The minimum amount of anesthetic should be given which is consistent with the production and maintenance of the desired degree of anesthesia.

47. The weight of evidence is overwhelmingly in favor of ether rather than chloroform. There are very few contraindications to ether when it is properly managed.

48. Statistics do not sufficiently represent the dangers encountered, as the hair-breadth escapes far outnumber the deaths.

49. The skilful anesthetizer is never at a loss to know what to do in emergencies—and he does the necessary thing instantly. Most of the deaths occur in the hands of the relatively unskilled.

50. The greatest danger from chloroform is during the second stage of narcosis. Profound chloroform narcosis should not be induced within five minutes, nor should it often require more than ten minutes to produce it.

51. Chloroform is nearly or quite as dangerous in the vigorous as in the debilitated, because the vigorous circulation takes it up and distributes it rapidly. Often it is the concentration of chloroform in the system, rather than the amount, which kills.

52. In the treatment of anesthetic asphyxia, tracheotomy should be resorted to when other means fail.

53. In anemia of the medulla the patient should be placed in the head-down position. In sudden paralytic dilation of the right heart, as after several deep inhalations of chloroform, the heart should be rhythmically compressed by squeezing the chest; or the patient placed temporarily in the feet-down posture to empty the heart, artificial respiration being constantly maintained.

54. The safe anesthetic will probably never be found, as the production of unconsciousness has an element of danger associated with it. Nitrous oxid-oxygen anesthesia is the safest anesthesia known.

55. It is more the method employed and skill displayed in administering anesthetics than the particular anesthetic used that in most cases lead to favorable termination and rapid recovery from an operative procedure.

56. The surgeon is frequently more concerned about the anesthetizer's work than about his own, as in over half the cases the anesthetic is more dangerous than the operation. The surgeon can not do his best operating while devoting half his attention to the anesthetic.

57. When possible, anesthetics should be administered by those especially skilled in their use. The specialist in anesthesia is a necessity of the times, and in order to become a first-class anesthetist special aptitude is required.

58. The subject of surgical anesthesia should be taught as a special branch in medical colleges, and each senior student should have practical experience along this line, under the supervision of a skilled anesthetist.

59. If all physicians and surgeons could be made to realize the fact that chloroform is vastly more dangerous than ether, then chloroform would be discarded as a routine anesthetic and used only in exceptional cases.

NOTE.—At the meeting of the American Surgical Association, held in Washington, May 12-14, 1903, John C. Munro, Boston, reported a series of 500 surgical patients showing albumin and casts in the urine, without evidences of renal degeneration before anesthetization. Nearly all of these patients were anesthetized with ether, and in none of them was any noticeable renal damage inflicted. Most of these patients were of the poorer classes and entered the hospital poorly nourished and debilitated.

DISCUSSION.

DR. JAMES E. MOORE, Minneapolis—I dissent from the last statement the gentleman made. I have been doing surgery for the past thirty years, and have done a lot of it during the past twenty years. I have used chloroform in 95 per cent. of all my operations, and I have never had a death, either at the time or subsequently, due to the anesthetic. The author says that when a patient dies from ether anesthesia it is usually due to faulty administration. That remark, gentlemen, applies eminently to chloroform. His third conclusion is worth discussion, if he had made no other remark during his whole paper. He says a competent anesthetizer is necessary. With a competent anesthetizer I have no fear of chloroform, save in cases where its use is contraindicated, and the longer I use it the more convinced I become of the truth of this principle. It is not the anesthetic that is dangerous so much as the unskilled anesthetizer.

DR. A. J. OCHSNER, Chicago—The statement made by Dr. Moore concerning the anesthetist who understands his business thoroughly is absolutely correct, but we must remember that more than one-half, and possibly more than three-fourths, of all the anesthetics are administered by anesthetists with very little experience, consequently, with the conditions as they exist, I believe that the last conclusion of the author will still stand. In my own practice I use chloroform to anesthetize the patient regularly and change to ether before the operation is begun, unless there is a distinct contraindication, and I do it because I have a competent anesthetist. I would not do so unless I had. So, taking the conditions as they should be, I believe that Dr. Moore's point would be perfectly right, but taking the conditions as they exist, I believe that the author's conclusion is absolutely correct. There is always a feeling of confidence in the operator, if his anesthetist is not experienced in giving ether, because the more he gives the better it is for the patient, while, if the same anesthetist should give too much chloroform it would be very bad for the patient. I would say that if either of these anesthetics give trouble to the patient, then that anesthetic should not be used again during the same operation. If chloroform be given and the patient shows any bad symptoms, the chloroform should be abandoned throughout the operation, because the second or third time that trouble comes it may be fatal. In the administration of chloroform one point to be borne in mind which very frequently is overlooked, is that when trouble comes it is important to get rid of as much of the chloroform as possible. In making artificial respiration for the purpose of resting the patient, as a rule, the first thing done is to lift the arms and fill the lungs, presumably with air, but as a matter of fact with the chloroform, which is in the upper part of the lungs, and therefore, instead of giving the patient air you give him a very large dose of chloroform on top of what he already has. Therefore, the first thing to do is to make a number of very rapid and complete compressions of the chest in order to force out as much of the chloroform as possible. Aside from artificial breathing, I believe there is absolutely no use in all the methods which have been recommended for the purpose of reviving patients who have gotten into a dangerous condition during the administration of an anesthetic. There are but very few minutes to do anything for the patient if there is real danger. The practice Dr. Mellish makes of preparing the patient is very good. By his taking a big dose of castor oil to get rid of the fecal matter he is placed in a much better condition to stand the anesthetic. Of course, if his kidneys are bad, or if he has a bad heart, these conditions should be looked after.

The element of confidence on the part of the patient is of the very greatest importance. If you have a person giving the anesthetic in whom the patient has confidence that patient is not likely to get into trouble. If the patient vomits after the operation, gastric lavage will give immediate relief in most cases.

DR. M. B. TINKER, Baltimore—Local anesthesia I feel should be so much more extensively used than is now done. Many surgeons do not appreciate how much can be done under local anesthesia. As an example, hernia operations can be done under cocain and with so little discomfort to the patient that they say in many instances that the pain is less than attempts made to reduce the hernia by taxis. I would not advocate local anesthesia in all cases by any means, but I am convinced that it does save a certain number of deaths from ether pneumonia, lung embolism, heart failure and other causes which I do not believe can be avoided if general anesthesia is employed. Several factors essential to success in the use of a local anesthetic: In the first place the patient should understand the advantages of operation under local anesthesia, and want it done in this manner. If he does not want the operation done in this manner he will object to the slightest pain and you will not be successful. Another point of great importance is the necessity for taking plenty of time; you can rush local anesthesia. You have to take care to infiltrate tissues well and take time for dissection. If you do not you will cause your patient much pain and he will complain so bitterly that you can not complete the operation. A good sized preliminary dose of morphin is also of great importance, say 1-6 of a grain one hour before the operation, another 1-6 at the beginning of the operation and still another 1-6 during the operation. A good moral anesthetist at the head of the table will be of great advantage in distracting the patient's attention from the slight pains.

DR. WILLIAM J. MAYO, Rochester, Minn.—We have for years preferred ether to chloroform, even though there may be just as many deaths from ether as from chloroform. When a fatal result does occur, the patient has a much better chance to bid good-bye to his friends than if he died from chloroform anesthesia. Dr. Ochsner brought out one very excellent point, that the first thing to do in trouble from chloroform anesthesia is to force all of the chloroform out of the lungs by compressing the lungs before forcing the patient to take an inspiration. The Souchon anesthetizer is a very valuable apparatus for operations on the throat and mouth.

There is a large tendency in this country to settle things in the laboratory. This can not be done. Now, take the question of hemoglobin, and the influence which it exerts on anesthesia; the amount of hemoglobin present is not usually so important a fact as is the cause of a loss of hemoglobin. I have often operated when the hemoglobin was as low as 25 per cent., due to hemorrhage, and I have never seen an accident following such an operation. But if you do an operation on a case in which from some malignant cause the hemoglobin is reduced to 40 per cent. or 50 per cent., and the oxygen-carrying power of the patient is decreased, you stand a chance to lose the case because with cachexia the blood is poor in oxygen-carrying power. We are exceedingly afraid of low hemoglobin in cancerous disease, but I would not hesitate to perform an operation with the hemoglobin as low as 25 per cent., provided the disease is due to blood loss resulting in anemia, and provided I can reach the cause of the loss of hemoglobin.

DR. JOHN E. SUMMERS, JR., Omaha—I want to call attention to the post-operative effects of anesthetics on the temperature curve. For some time I have been noticing that after prolonged operations under ether we would occasionally get a temperature curve. This used to be called "reaction," but now I have become convinced that it is due to the anesthetic. I have gotten so that I think I can recognize it, and am not alarmed.

Anybody who has lost a case on the table never forgets the anesthetic. I have had the misfortune to lose one case on the table from chloroform, and it does not make me feel any better to know that every surgeon in my vicinity has had the same experience. Death comes so suddenly that it does not give you an opportunity to protect yourself or your patient. Dr. Mayo has expressed it very nicely by saying that it does not even give the patient an opportunity to say good-bye to his physician or his friends. Recently a little child was brought into the hospital with a compound fracture of the leg. He was given chloroform and the fracture reduced. Just as he was coming out of the anesthetic he vomited and aspirated some potato into his trachea. I opened the trachea immediately, but the child died from asphyxiation. I think it is always better in emergency work, especially among children, to wash out the stomach prior to the administration of the anesthetic, and in our hospital where much emergency work is done, I have made this a standing order because we can not know whether the stomach is empty or full.

In the Johns Hopkins Hospital, I notice by their Bulletin, that Cushing has found by experiments with the tonometer that chloroform always reduces arterial pressure more than does ether. I think there is no doubt that we are more liable to have accidents happen if we use chloroform than if we administer ether.

DR. E. J. MELLISH, El Paso, Texas—Dr. Ochsner spoke about using chloroform in all cases when he has a competent anesthetizer. It can be used more safely with a competent anesthetizer, but I have found from experience that no matter how chloroform is used it is more dangerous than ether. Dr. Moore's favorable experience with chloroform is doubtless due to skilful management of the anesthesias. Within a period of eight years I saw four deaths on the table from anesthetics, three from chloroform and one from ether. The patient who died from ether was extremely apprehensive before the anesthesia—lacked the necessary confidence in the anesthetizer. When this confidence is absent the danger is greatly increased. I have had at my disposal the records of 6,000 anesthesias at a Chicago hospital. The first three thousand anesthetics were given under the supervision of skilled anesthetizers. The last three thousand were given by those much less skilled in the administration of anesthetics. There were three deaths in this series, all occurring in the second three thousand cases. When chloroform is used, dangerous symptoms are likely to develop much more rapidly than after ether administration, and in the latter condition you have a much better chance to resuscitate your patient.

Another thing is, that chloroform, being heavy, is eliminated very slowly, and it has been detected in the sputa two or three days after the anesthesia. This means that the patient is continuously more or less poisoned during this time. Ether is eliminated much more rapidly.

TWO CASES OF PARATYPHOID INFECTION; ONE CAUSED BY AN ABERRANT ORGANISM.

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Cases of paratyphoid fever, both sporadic and epidemic,[1] have been reported so frequently of late that perhaps some special reason should be given for calling attention to any more isolated cases. In the present instance the author believes that the bacteriologic findings are of sufficient interest to warrant a brief presentation:

CASE 1.—The patient, a man aged 58 years, entered the Presbyterian Hospital, Oct. 22, 1902. His temperature by mouth was 102.2, and he complained of frontal headache and severe abdominal pain. The abdomen was tender everywhere, but the liver and spleen were not palpable and no rose spots were visible. November 1 the patient had two hemorrhages from the bowels. The first was slight and only a small amount of blood was cast out. About three pints of liquid blood containing some clots were discharged with the second hemor-

1. Conradi and v. Drigalski: Zeit. f. Hyg., 1903, xliii, 141.

rhage. The abdominal distress and headache continued through the first week of November, and during this time the patient was very weak and restless and at times slightly delirious. Beginning with the second week of November he began to show definite signs of improvement, and from this time his progress was uninterrupted and he was discharged November 21.

No rose spots were found at any time. The Widal test for typhoid was persistently negative throughout the course of the disease, even in dilutions as low as 1 to 10.

Five cubic centimeters of blood were drawn from one of the large veins of the arm, using the usual surgical precautions for asepsis. About 3 c.c. of this blood were put into five flasks each containing 150 c.c. of sugar-free bouillon and within twenty-four hours the organism to be described was obtained in pure culture.

This organism resembles the typhoid bacillus in morphology. It shows no capsule; it is not sporogenic. It stains somewhat unevenly with anilin dyes and is readily decolorized by Gram's method. It is motile, but is more sluggish than *B. typhosus*.

CULTURAL CHARACTERISTICS.[2]

Bouillon.—A uniform turbidity is shown in twenty-four hours. No scum forms even when growth continues for several days.

Agar.—A heavy white growth appears in twenty-four hours. This is moist with a raised margin and a smooth homogeneous surface. The growth is largely limited to the line of inoculation.

Litmus Milk.—No change is noticeable during the first forty-eight hours, but after the second day the reaction soon becomes strongly acid. No precipitation of casein occurs. At the end of several weeks the medium presents a deep blue color.

Gelatin.—No liquefaction occurs.

Neutral-red Agar.[3]—Both stab and shake cultures were used. A few gas bubbles formed, but no change occurred in the color of the media, even after several weeks.

Carbohydrates.—Glucose, saccharose, levulose, lactose, mannite, galactose and dextrin were tested in the fermentation tube. One per cent. of the carbohydrate was added to ordinary nutrient broth after removing the muscle sugar. Care was observed in every case to prevent overheating the sugar broths, and all that became darkened in heating were discarded. Gas production occurred only in the glucose broth.

REPORT OF A SECOND CASE.

A second case came to the writer's attention at the time the organism just described was being studied. This case was a private patient of Dr. James W. Walker and the organism was isolated by Dr. Harris of the College of Physicians and Surgeons, Chicago, and given to me for further study. This organism resembles very closely the bacillus isolated from Case 1 in its morphology and growths in bouillon, agar and gelatin.

Litmus Milk.—A slight acidity is noticed within the first twenty-four hours, but this is lost during the second or third day and the color again becomes neutral. After several weeks the medium assumes the same deep blue color described under Case 1.

Neutral-red Agar.—Gas bubbles are formed within twenty-four hours in both stab and shake cultures. The color is rapidly changing during this time so that only in the lower one-fifth of the medium does the color still persist. It is almost entirely reduced to a light yellow by the end of the fourth day. After the first week the color gradually returns until the original appearance is again given. This return of color seems to occur from above downward instead of from below upward, as described by Buxton.

Carbohydrates.—This organism was grown in saccharose, glucose, mannite, levulose, lactose and dextrin media, using 1 per cent. in bouillon as before. Gas was formed in each case except in the broth containing saccharose and lactose. The fermentation tests with this organism seemed to follow so closely the results described by Buxton[4] with his paratyphoid bacillus and closely allied forms that a comparative study was made in the different carbohydrates with the two forms here described and Buxton's organism. The gas formed was only roughly analyzed by the use of 2 per cent. NaOH.

PARACOLON BACILLUS FROM BUXTON'S CASE 7.

	24 hrs. p. cent.	48 hrs. p. cent.	72 hrs. p. cent.	5 days. p. cent.	
Saccharose	..	..	..	..	
Glucose	40	45	..	..	$H_2 : CO_2 = 3 : 1$
Mannite	50	..	..	..	$H_2 : CO_2 = 4 : 1$
Levulose	50	..	..	..	$H_2 : CO_2 = 6 : 1$
Lactose	..	..	..	..	
Dextrin	5	10	10	22	$H_2 : CO_2 = 4 : 1$

ORGANISM FROM CASE 2.

	24 hrs. p. cent.	48 hrs. p. cent.	72 hrs. p. cent.	
Saccharose	..	..	..	
Glucose	22	40	41	$H_2 : CO_2 = 2 : 1$
Mannite	50	55	..	$H_2 : CO_2 = 4 : 1$
Levulose	30	45	..	$H_2 : CO_2 = 2 : 1$
Lactose	..	..	..	
Dextrin	5	15	20	$H_2 : CO_2 = 3 : 1$

ORGANISM FROM CASE 1.

	24 hrs. p. cent.	48 hrs. p. cent.	72 hrs. p. cent.	
Glucose*	..	30	50	$H_2 : CO_2 = 5 : 1$

* No fermentation was obtained with saccharose, mannite, levulose, lactose and dextrin.

A comparison of the tables showing the carbohydrate tests indicates a close relationship between Buxton's paratyphoid bacillus and the organism[5] isolated from Case 2. This is also shown by a comparison of the growths in litmus milk and neutral-red agar. In order to study still further this similarity a comparison was made of the agglutinative characteristics of Buxton's form and the two organisms here described.

MICROSCOPIC AGGLUTINATION TESTS.

No dilutions were made above 1 to 100. Buxton's paracolon was tested with serum from Case 2 and agglutination was shown in dilutions as high as 1 to 50. Serum from Case 2 was tested with Bacillus 1, and agglutination occurred in all dilutions as high as 1 to 50. Above this, dilutions as high as 1 to 100 gave almost complete agglutination, but I was unable to decide at any time that all motility was positively lost. Serum from Case 1, and also from Case 2, was tested with typhoid and hog cholera bacilli and *B. enteritidis* with negative results in every case even in dilutions as low as 1 to 10.

MACROSCOPIC AGGLUTINATION TESTS.

Small hemolysis test tubes were used in which the bacilli, in definite quantities, were added to a serum of the desired dilution, and after three hours' incubation the results were noted with the naked eye. The agglutination was considered positive only when complete

2. Except where stated otherwise all media were prepared according to the "Proceedings Recommended for the Study of Bacteria." Reports and papers of the American Public Health Association, 1898, xxviii, p. 60.

3. Neutral red agar was prepared by adding to neutral agar 0.5 per cent. dextrose and 1 per cent. of a 0.5 per cent. aqueous solution of neutral red (Grübler's).

4. Buxton: Jour. Med. Research, 1902, viii, 201.

5. The forms isolated from Cases 1 and 2 will hereafter be referred to as Bacillus 1 and Bacillus 2 respectively.

precipitation had occurred, leaving the liquid clear. Serum was obtained from four rabbits. Of these, one was immunized with Buxton's paratyphoid bacillus, the inoculations being continued until rapid agglutination was given at 1 to 2,000. A second rabbit was immunized with a typhoid organism.[6] The third rabbit was inoculated with the bacillus of hog cholera[7] until complete agglutination was given at 1 to 1,000. The fourth rabbit was inoculated with the *B. enteritidis*.[8] The degree of agglutinative power reached in the serum of this rabbit was much lower than in any of the others, as the highest dilution giving positive results was 1 to 400.

Serum from the rabbit immunized with Buxton's paratyphoid bacillus gave negative results in dilutions of 1 to 10 with the bacilli of typhoid and hog cholera and with *B. enteritidis*.

Sera from the rabbits that had been inoculated with the organisms of typhoid, hog cholera and with *B. enteritidis* gave negative results at all dilutions with Buxton's form and with both Bacillus 1 and Bacillus 2. Bacillus 1, when added to Buxton's serum, was agglutinated at 1 to 100. Above this the precipitation was never found to be complete. Bacillus 2 was completely precipitated by the Buxton serum at all dilutions as high as 1 to 2,000. No dilutions were tried above this. Using the sign + to indicate complete agglutination, these results may be tabulated as follows:

	Bacillus 1.	Bacillus 2.	Buxton's form.
Buxton serum	+100	+2000	+2000
Typhoid serum	— 10	— 10	— 10
Hog-cholera serum	— 10	— 10	— 10
Enteritidis serum	— 10	— 10	— 10

To summarize, Bacillus 2 must be regarded as an organism which possesses the general characteristics of the paracolons, and, from its growth in litmus milk and neutral-red agar, together with the fermentation and agglutination tests, possesses a close relationship to Buxton's form. I have not made comparisons with other members of the paratyphoid group, but from Buxton's comparative study Bacillus 2 would seem to belong to the subgroup which comprises the organism isolated by Gwyn,[9] two forms described by Johnston,[10] Hewlett's form,[11] the bacillus Müller of Schottmüller,[12] Buxton's paracolon[13] and possibly Cushing's[14] Bacillus O.

Bacillus 1, while conforming to the general tests for paratyphoid bacilli, seems to occupy rather an independent position. The clinical history of this case is specially interesting because it shows the occurrence of two hemorrhages from the bowel. In the eighty-four cases of paratyphoid infection that have been reported, but four cases with hemorrhage have occurred. One was the case reported by Gwyn. Another, reported by Strong[15] showed a complication from malarial infection. The third case was reported by Hume[16] and the fourth was one of an epidemic of fourteen cases reported by De Feyfer and Kayser.[17]

In morphology, Bacillus 1 shows no important points of difference from the rest of the paratyphoid bacilli which have been described, but in its special cultural characteristics it presents very marked individuality. It develops a strongly acid reaction in litmus milk, which does not, however, cause a coagulation of the casein and which changes to the typical alkaline state, although very slowly. No reduction in the color of the neutral-red agar occurs, which would seem to point toward a relationship with the typhoid bacillus.

The absence of fermentation, except in the glucose media, shows a particularly wide departure from the common type of paratyphoid organism studied by Buxton.

I am indebted to Dr. E. O. Jordan for many valuable suggestions and criticisms during the progress of this work, and to Dr. B. W. Sippy, who was the attending physician to the first case I have reported, for favors received at the hospital.

6. This form was Typhoid 6 of Theobald Smith, which was originally obtained from the spleen of a typhoid patient. This serum agglutinated the typhoid bacillus in dilution of 1 to 25,000.

7. This organism is one obtained from V. A. Moore of the New York State Veterinary College, Cornell University.

8. This organism is from the stock cultures of the university laboratory, and possesses the typical cultural characteristics of *B. enteritidis*. The source is unknown.

9. Gwyn: Johns Hopkins Hosp. Bull., 1898, ix, 54.

10. Johnston: Amer. Jour. Med. Sci., 1902, cxxxv, 187.

11. Hewlett: Ibid., 1902, cxxiv, 200.

12. Schottmüller: Deut. med. Woch., 1900, xxvi, 511.

13. Buxton & Coleman: Amer. Jour. of Med. Sciences, 1902, cxxiii, 976.

14. Cushing: Johns Hopkins Hosp. Bull., 1900, xi, 156.

15. Strong: Johns Hopkins Hosp. Bull., 1902, xiii, 107.

16. Hume: Report of the Thompson Yates Laboratory, 1902, iv, 385.

17. De Feyfer and Kayser: Münch. med. Woch., 1902, xlix, 1692.

Clinical Reports.

A CASE OF PARATYPHOID.

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CHICAGO.

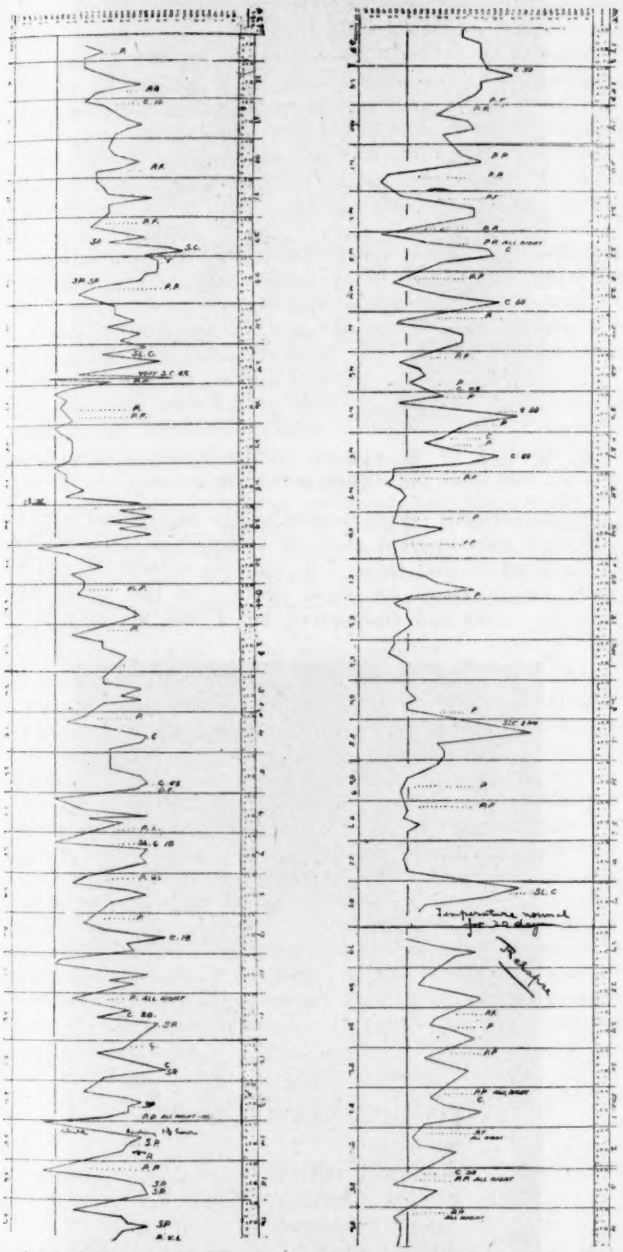
Until the symptomatology of the various forms of paratyphoid has been tabulated more completely than at present, apology for publishing clinical cases in detail should be superfluous. For the working out of the bacteriology and, therefore, for the establishment of the diagnosis, I am indebted to Mr. G. Bertnard Smith, who publishes his report separately in this number of THE JOURNAL, and to Dr. Fr 1 G. Harris, pathologist of Cook County Hospital, who began the culture.

Dr. H. M. R.; aged 30; Jewish; family history negative. Eleven years ago was ill for ten days with what was said to be typhoid, but this is doubtful. Has not been out of Chicago for years. Present illness began about Sept. 10, 1902, with malaise, chilly sensations, headache, anorexia, free perspiration and slight temperature, with which symptoms patient went about his professional duties for a week, and on September 17 went to bed with what he and I presumed was ordinary typhoid fever. Pulse was then 80; physical examination negative, and it may be stated here to dispose of the matter, that at no time was the spleen palpable, there were never any rose spots, no tympanites, no diarrhea, no abdominal tenderness, in short, no abdominal symptoms nor signs. There was never any cough, nor was the tongue ever dry; patient was never unconscious, though there was some stupor during the first days in bed. From the beginning the chills (see temperature chart), perspiration and fever were the dominant symptoms, and led to a repeated search for the *Plasmodium malariæ*, which was fruitless.

September 22 there was nausea and vomiting. September 23, very restless and uncomfortable. Second heart tone duplicated, pulse 130, dyspnea evident when talking, no râles nor cough, complained of diffuse pain throughout the chest. September 24, numbness of both little fingers, severe chills, albumin in the urine.

September 25, (1) The repeated severe chills, with absence of the plasmodium, and despite the liberal use of quinin; (2) the drenching sweats, (3) the diffuse chest pain, (4) the increasing dyspnea, (5) the absence of the Widal and Ehrlich reactions, (6) absence of all abdominal symptoms and signs, (7) the very irregular temperature, and (8) the general evidence of profound toxemia in the absence of a discoverable local lesion, strongly inclined me to think the case one of acute miliary tuberculosis.

Dr. A. R. Edwards consulted with me and saw the patient when at his worst. He thought the chances between tuberculosis and an atypical typhoid were about even, with a slight leaning toward the latter. Within five hours the clinical picture was much changed, and with it my opinion. Patient became cheerful and brighter and the dyspnea was diminished. His temperature had fallen seven degrees in one hour, and it then remained below a hundred for nearly three days. The change was almost in the nature of a crisis. September 28, pain in the left groin developed and the following day a femoral thrombosis was evident on palpation.



Clinical chart of Dr. Walker's patient. Explanation of lettering: P. P., Perspired profusely. P. F., Perspired freely. P. V. L., Perspired very little. SL. P., Slight perspiration. SP., Sponged. V., Vomited. C., Chill. SL. C., Slight chill. S. C., Severe chill. The figures in connection with the chills indicate the duration in minutes, unless otherwise specified.

September 29 Dr. F. G. Harris inoculated five flasks of bouillon with blood drawn from a vein. It is from this culture that the findings reported by Mr. G. B. Smith are derived. Urine, specific gravity 1022, trace of albumin, peptone present, few hyaline casts. Pulse ranged about 110, except at time of chills, when it went to 130 or 140. October 15, no new developments. Phlebitis now hardly noticeable; feels comfortable, except when temperature rises; sleeps better. November 7, feels strong and free from pain. November 12, walked a little.

During the relapse, beginning November 27 and lasting one week (see chart), the only important symptoms were again the chilliness, perspiration and fever. He eventually made a complete recovery. Of the cardinal symptoms it may be added that the chills were of the severity of malarial chills, and the sweats so profuse that his nightgown had to be changed from three to seven times in a night. The variability of the fever is indicated by the chart. At different times during the course of the illness the blood was examined for the Widal reaction, independently, by Drs. Hektoen, W. A. Evans, F. G. Harris and G. B. Smith, with negative results.

SERRATUS PARALYSIS.

RICHARD LIGHTBURN SUTTON, M.D.
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WASHINGTON, D. C.

Owing to the comparative rarity of this particular type of peripheral palsy I report the following cases which recently came under my observation in the service of Dr. H. M. Thomas, in the Johns Hopkins Hospital Dispensary.

CASE 1 (Neurologic, No. 14,722).—An American woman, aged 32, married, and a housewife by occupation.

Family History.—Her family history is unimportant; her father, who had always enjoyed excellent health, died at an advanced age, and her mother is still living. There is no suspicion of inherited constitutional disease, and none of her immediate relatives has ever suffered from paralysis.

Previous History.—She had the usual diseases of childhood, pneumonia at 18 and typhoid fever at 20. There is no evidence of her ever having had venereal disease and she is not addicted to the use of intoxicants. She has been married four years, has a healthy child 3 years of age, and there has been one miscarriage, thirteen months ago. Her surroundings are good, and she has no hard or difficult duties to perform.

Two years ago she suffered from a peculiar numb, prickling sensation in the forearms and hands which came on suddenly and was not accompanied by local coldness, tenderness or edema. No weakness nor motor disturbance of the parts followed, although there was some stiffness of the phalangeal joints. The attack lasted eight days. She has since been well up to within two months previous to her admission to the dispensary, except for a slight, painful swelling of the left ankle one year later.

Present Trouble.—On May 5, 1903, while in her usual health and without any known cause, she experienced, immediately after taking a hot bath, severe pain in both shoulders, radiating down the arms. The pain was very intense, but gradually subsided in the course of three weeks. It was associated with some swelling of the hands, but the joints seem not to have been affected. After the subsidence of the pain she noticed a slight drooping of the right shoulder, with inability to manage the joint. She was unable to lift her hand to her head, although she could raise a bucket, or other heavy object, from the floor. A physician told her she was suffering "from a dislocation of the shoulder, due to rheumatic contraction of the muscles," and after two months' treatment it was with this complaint that she came to the dispensary.

Examination.—On admission the patient was seen to be a small, well-nourished, intelligent woman. Her color was good, teeth sound and well shaped, no blue line on gums, and the general physical examination was negative. There was no abnormality discovered in the functions of any of the cranial nerves. The movements of the head and neck were perfect. With the patient standing erect, when the trunk was examined posteriorly, there was some lateral curvature of the spine, the convexity being to the right.

At rest, with arms at side, the inferior angle of right scapula was a trifle more prominent than that of the left. When the patient endeavored to extend the arm anteriorly a marked deformity developed. The scapula rotated on its vertical axis, its inner border leaving the chest wall, giving the

typical picture of "wing scapula." This became more pronounced when the patient made an effort to depress the arm against resistance. She was unable to raise her hand above her head, nor could she abduct the arms laterally at more than a right angle. All the movements appeared to be somewhat impaired, although there was no paralysis of any of the muscles other than the serratus. The deltoid seemed a trifle flabby, but the muscles moving the elbow, wrist and smaller joints were apparently normal. The left arm and hand were unaffected. There was no sensory disturbance discovered.

Electrical examination showed a normal response to all muscles except the serratus, and we were unable to get a satisfactory contraction from it on either side, although several efforts were made with both the galvanic and faradic currents. The muscles of the trunk and legs were not affected.

Diagnosis.—It was evident that this patient was suffering from a paralysis of the serratus magnus muscle, due, in all probability, to a neuritis of the brachial plexus which had injured the trunk of the posterior thoracic nerve.

Treatment.—She was placed on tonic treatment, in the form of tincture of nux vomica, m. xx, t. i. d., and galvanism

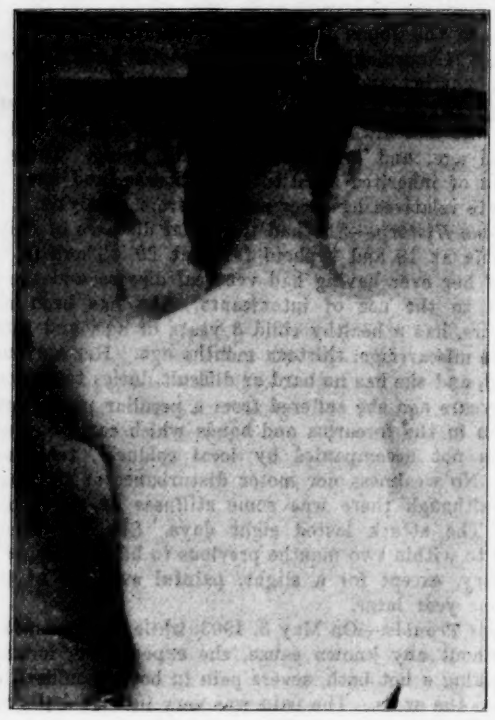


Fig 1.—Case 2. Displacement of the right scapula when the arm was held horizontally in front.

applied to the brachial plexus and the affected muscles twice weekly. We were not able to secure a photograph at this time, but her condition is accurately depicted by the first picture of the accompanying case.

Course.—After the treatment had been continued for three or four weeks marked improvement was evidenced and an examination on September 8 showed almost complete restoration of function. The patient herself experienced no discomfort. She could raise the arm above her head or extend it laterally and the scapula showed no tendency to leave its normal position. If, however, she was given a heavy book and told to raise it upward the full length of her arm, then lower it slowly, the vertebral border of the scapula receded from the chest wall and the entire bone rotated slightly, showing that the muscle was still weak.

CASE 2.—(Neurologic, No. 10,407.) A white man, aged 38, a street-car conductor, first came to the dispensary Oct. 23, 1899.

Family History.—Negative, none of his immediate relatives, so far as he knows, having ever suffered from nervous or mental disease.

Previous History.—He has always enjoyed excellent health, does not remember having had the diseases of childhood, and denies venereal disease. Owing to the character of his work he is subjected to considerable exposure during bad weather.

Fig. 2.—Case 2. Displacement of the right scapula when the arm was held above and slightly in front of the head.

Present Trouble.—Five months ago he experienced a severe attack of pain in right shoulder accompanied by a swelling of the hand on that side. This came on without appreciable cause and persisted for three weeks. At the end of that time the edema had disappeared, but a dull, aching pain remained and he noticed impaired movement of the shoulder. It was for this condition that he came under treatment.

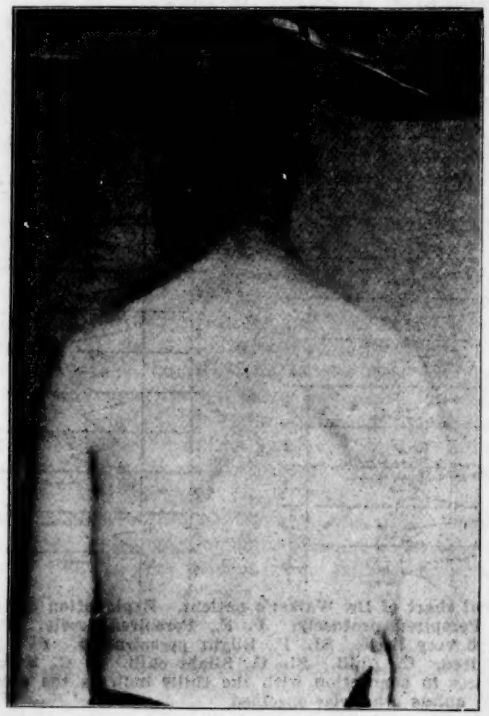


Fig. 3.—Case 2. Displacement of inferior angle of right scapula when the arm was held at the side of the trunk.

Examination.—The patient, on admission, was found to be a hardy-looking, rather muscular man of medium size, with face and hands showing evidence of exposure to sun. Teeth

fairly good, no blue lines on gums, functions of all the cranial nerves normal; the general physical examination was negative.

With the patient standing upright, arms at sides, the inferior angle of the right scapula was about 6 cm. higher than that of the left, and protruded backward from the posterior thoracic wall, a trifle farther than its fellow of the opposite side. There was marked impairment in the use of the muscles of the entire shoulder, because of inability to control or fix the scapula. When the hand was raised above the head by a second person the patient complained of pain in the region of the scapula, extending out toward the arm. The accompanying photographs give an excellent representation of the attitude assumed by the shoulder blade when the arm was placed in various positions. There was considerable atrophy of the right deltoid and both biceps and pectoral muscles were soft and flabby on that side.

Electrical examination showed a lack of faradic irritability only in the serratus and the lower portion of the trapezius on the right side, with a sluggish but not delayed reaction to the galvanic current in these muscles. The response was normal in all of the others.

Treatment.—The patient was given no internal treatment, but the right brachial plexus, posterior thoracic nerve and the affected muscles received galvanism twice each week for a considerable period of time. March 19, 1900, he was able to raise his hand above his head. The scapula still projected slightly when the limb was elevated.

Course.—He returned to work in August, 1900, but the constant and oftentimes violent movement brought on a relapse, and he was compelled to give up his position again. The current was applied regularly, however, and the improvement, while slow, was continued. In May of the following year (1901) recovery was complete, and he has not lost a day on account of illness since that time. A recent examination shows the parts to be normal in every way, and the electrical tests gave practically the same results on the two sides.

Comments.—Cases of serratus paralysis, although well recognized, are of uncommon occurrence. Among 14,956 cases registered in the neurologic department of the Johns Hopkins Hospital there are but these two uncomplicated conditions of this character. In each the etiologic factor was a neuritis of the brachial plexus, affecting the nerve supply of the serratus secondarily. The primary cause in Case 2 was, in all probability, exposure, coupled with overexertion of the parts comprising the shoulder girdle. The practical points illustrated by these two cases are: 1. The relative infrequency with which the condition is encountered. 2. The intimate relationship its etiology bears to inflammation of the nerve trunks composing the brachial plexus. 3. The liability to unilateral involvement of the right side. 4. The favorableness of the prognosis in cases where trauma is not a factor in the causation. 5. The importance of early and continued treatment by galvanism.

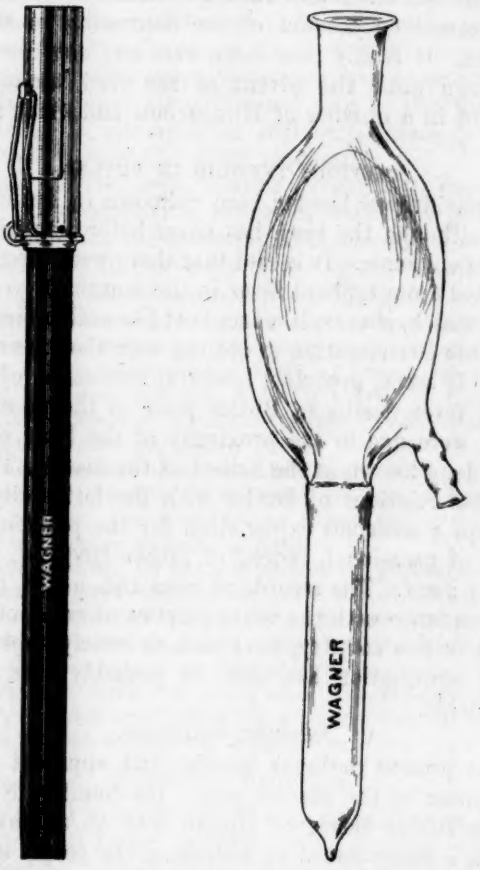
New Instrument.

THE HUGHES IONIZER.

R. V. WAGNER, M.D.
CHICAGO.

Electricity is generally conceded to be a mode of molecular motion, and the higher the voltage or tension of the current becomes, the higher the mode of motion. When electricity is conducted through a substance it must impart a mode of motion to its molecular structures, and if this mode of motion is violent enough it disassociates the molecular structures and breaks them up. Very high voltage or high tension currents conducted through the air decompose the elements of the air, producing ozone in large quantities; it is on this principle that ozone generators have been commonly constructed. But the highest tension currents do not impart as high a mode of motion to the molecular structures of the normal air as to those of rarified air; as the molecular structures of rarified air in a vacuum tube may be made to move at a much higher rate than is obtainable in any other way, the inductive energy arising from vacuum tubes impart a correspondingly higher mode of motion to the structures of the air surrounding them, producing more perfect decomposition.

It is on this principle that this new instrument has been constructed. A vacuum tube, excited by a high frequency, high tension current, is enclosed in a chamber through which air may be passed and the air acted on by the excited vacuum tube is much more finely broken up (breaking the molecular structures into atoms and the atoms into ions) than when the high-tension current is conducted through the air directly. One great disadvantage in the use of decomposed air is that the decomposed nitrogen produces effects on the tissues that are not desired, but in this instruument the air passing through the chamber may be made to carry remedies of an alkaline character so as to neutralize the acid effects produced by the decomposed nitrogen. If the ionizer be used in



combination with a nebulizer, the remedies held in suspension by the air acted on will be more finely broken up and decomposed than any nebulizer or atomizer is capable of doing, and in the treatment of nose, throat and lung troubles will be more effective by reason of the increased degree of penetration.

308 Dearborn St.

Accuracy in Therapeutics.—Medicine is a progressive art, and is becoming more scientific. Causes of symptoms and diseases are now known, and the attempts made at their eradication is a chief principle in treatment. Manual or mechanical aids are being used with increasing frequency and satisfaction. The local application of drugs is used much more frequently, instead of soaking the whole body to get the effect on some special part. Instead of huge doses of crude drugs, the alkaloids or active principles are being used, so that one can now medicate with as much skill and as definitely as he can use the knife, stopping short at the physiologic effect or increasing or decreasing the effect as he wills.—*Iowa Medical Journal.*

Special Article.

THE TYPHOID EPIDEMIC AT BUTLER, PENNSYLVANIA.

(From Our Special Commissioner.)

The newspaper reports of the typhoid epidemic at Butler, Pa., have not been exaggerated. Butler is a thriving little city of about 16,000 inhabitants, most attractively situated in a hilly country in western Pennsylvania, about forty miles northwest of Pittsburg. It is primarily an oil town, and as such has been considered particularly prosperous. The manufacture of plate-glass under local management is one of the leading industries. In the spring of 1902 the Standard Steel Car Company opened extensive works at Butler and these were in operation until a few months ago, when they were closed on account of the depression in the steel market. It is said that there were no "poor people" in the town until the advent of the steel works, which brought in a number of Hungarians and other foreigners.

PREVIOUS TYPHOID IN BUTLER.

Typhoid fever has not been unknown in Butler in the past, although the town has never before experienced a serious epidemic. It is said that there were seven deaths reported from typhoid fever in the month of November, 1902, which, if true, is a fact that the authorities should take into consideration in dealing with the present situation. It seems probable, however, that many of the typhoid fever deaths in Butler prior to the present outbreak were due to the proximity of the town of Pittsburg, long known as the hotbed of the disease. The close business relations of Butler with the latter city afford perhaps a sufficient explanation for the previous occurrence of occasional, indeed of rather frequent, cases in Butler itself. The records of cases and deaths, however, in accordance with the usual practice of small cities and towns in this country, have been so loosely kept that no exact information has been, or probably ever will be, obtainable.

PRESENT EPIDEMIC.

The present outbreak became first apparent early in November of the current year. On Sunday, November 8, the Butler Board of Health held an all-day session and as a result issued an address to the people of Butler advising them to boil all water used for domestic purposes. This prompt action seems to have been taken at the very beginning of the outbreak. After this date items to the effect that such-and-such a resident of Butler was ill with "the fever" appeared frequently in the local papers. It was not until about a week later, however, that any large measure of alarm began to be felt or expressed. On November 28 the gravity of the situation was manifest and the Pennsylvania State Board of Health was appealed to for aid and advice. Up to noon Saturday, December 5, a total of 1,180 cases had been recorded, and it is known that many more unreported cases actually exist within the city. Up to Saturday night 37 deaths had occurred. It is stated by those most familiar with the situation that over 60 per cent. of the cases have not yet passed the critical stage and it is feared that many more deaths will take place. Seventeen deaths have occurred within the last four days for which record is at hand. There is no doubt that the town is terribly stricken. Two, three or even more cases in the same family are not at all uncommon. The writer talked with one citizen who had had eight cases in his own family.

Even at this stage enough is known about the proportions of the Butler epidemic to establish it as one of the most appalling visitations from typhoid fever from which an American community has ever suffered. The disastrous outbreak at Ithaca last spring in a population of about the same size did not reach quite such gigantic proportions, and although the classical epidemic at Plymouth, Pa., in 1884 was probably more severe in proportion to the population of the town, there were in that case even fewer actual cases than at Butler.

SOURCE OF OUTBREAK.

The large number of persons attacked at Butler is in itself sufficient to cast suspicion on the water supply, and this fact conspired with other circumstances to render most plausible the hypothesis of a water-born origin. This suspicion became almost a certainty when the peculiar distribution of the typhoid fever cases became known. It transpired that the part of Butler lying south of the Baltimore and Ohio Railway tracks, and known locally as Springdale, was almost entirely exempt from infection. This district forms topographically and socially part of the town of Butler, and apparently differs only in the fact that it is not provided with city water, but obtains its supply from a number of artesian wells. In this part of the town, with a population of about 2,500, it is stated on high authority that but two cases have developed, one of these being a child who attended school in Butler, the other being a laborer employed in Butler. This remarkable topographical incidence pointed directly to the water supply as the source of the calamity, and further circumstantial evidence to the same effect is not lacking. No suspicious circumstances have been brought to light in the investigation of the milk supply and other theoretically possible sources, while the facts now to be set forth concerning the water supply are of a most significant and damaging character.

CHARACTER OF THE CITY WATER SUPPLY.

The water supply of Butler, which is controlled by a private water company (The Butler Water Co.), has been since 1878 obtained from Connoquenessing Creek and its feeders. The flow of this small stream is at certain times of the year inadequate to the needs of the growing town, and in order to furnish a constant supply the waters of the stream were impounded by a dam at Boydstown, some nine miles above Butler. This in turn did not furnish the required amount of water, and a second dam has been recently constructed on Thorn Run, about four miles above the town. The water seems to have been clarified for some time past by means of a small mechanical filter at the pumping station, a mile and a half above the town on Connoquenessing Creek, and two miles and a half from Thorn Run dam.

INFECTION OF THE WATER SUPPLY.

On August 28, the Boydstown dam was carried out in a flood, and the water company was obliged to use water

from the partly finished Thorn Run reservoir. Water was also pumped directly from the creek at the pumping station, and so scanty was the available supply that it is said that at times practically all the water in the creek was used. In the latter part of October, owing to an accident to some of the machinery at the pumping station, the mechanical filter was temporarily thrown out of use, and it was during this period that the maximum infection undoubtedly occurred.

Unfortunately, throughout the summer and early fall, opportunities for the infection of the Connoquenessing watershed appear to have been only too numerous. A number of cases of the disease existed on the watershed during this period and investigation has shown that there was ample opportunity for the uncared-for dejecta to enter the water of various small runs and tributary streams. At one house not far from the Thorn Run dam, a case of typhoid fever was brought to the family in the latter part of July and was followed by three others in the same household. At another house, on Sullivan's Run, even nearer to the pumping station, two cases of typhoid fever occurred, and it is considered probable that the infectious material from these two cases had a large share in infecting the water of the creek. Health officials who have thoroughly investigated the conditions report that for years cases of typhoid fever have been occurring at various points on the Connoquenessing watershed, and it apparently required simply a series of accidents to precipitate the present catastrophe. The situation is so discouragingly familiar as hardly to need repetition. The infectious materials discharged from the bodies of typhoid fever patients were thrown out on a steep, rocky hillside, or placed in loosely constructed out-houses, where the first heavy rain could wash countless millions of pathogenic bacilli into the water supply of an innocent community.

REMEDIAL MEASURES.

As soon as the existence of the epidemic became known the citizens were warned of the danger of using unboiled water for drinking and other household purposes. Hardly too much can be said in praise of the early recognition of danger by the local board of health and the prompt measures taken to prevent the spread of the outbreak. The Pennsylvania State Board of Health, likewise, responded at once to the call for assistance and seems to have acted with great promptness and efficiency. The sum of $2,000 was at once appropriated from the emergency fund at the disposal of the state board, local headquarters were established, the free distribution of disinfectants begun, the thorough inspection of the watersheds set on foot, and an effective system of house control established. A skilled veterinarian was also sent to Butler by the state authorities, and rigorous supervision of the milk supply is being exercised under his direction. The possible infection of utensils used in the distribution of milk is also being guarded against. The conditions governing the water supply are being improved as rapidly as possible. The mechanical filter is now thought to be in good working order, and an experienced water analyst from the Massachusetts Institute of Technology has been recently brought to Butler and placed in charge of the daily tests that are being made. The results of these tests are said to be very satisfactory.

RELIEF WORK.

When it became apparent to the outside world that the local resources were too seriously crippled to cope with the situation, help poured in on the town from all sides. In Philadelphia a large relief fund was subscribed and a number of physicians and nurses were soon on the ground. A temporary hospital has been established in one of the hotel buildings in Butler under the direction of the Philadelphia contingent, headed by Dr. Morris French. Physicians have also come to Butler from Pittsburg and many surrounding towns, and a small army of over 100 trained nurses has been hurried in to the relief of the city. The physicians of Butler have from the beginning been in the forefront of the relief work and have sacrificed unsparingly their time and strength with the same single-mindedness so often shown by members of the medical profession in times of great emergencies. Although much outside assistance has been rendered, there is still need for additional help in this direction, and strenuous attempts are still being made to obtain additional nurses and other assistants.

Rumors have been current regarding dissensions among those engaged in the relief work, and in view of these statements the following authorized statement has been issued by the secretary of the executive committee:

I am authorized by the executive committee to state that the reports emanating from unreliable sources published in various papers throughout the country to the effect that the different relief committees and auxiliary committees were not working in unison and that there is conflict and confusion among the members of the committee and coworkers are absolutely false in every particular.

The organizations that have been established within the past week for the relief of the fever victims are working in perfect harmony and there are no dissensions of opinion on account of religious or political creeds.

We are organized for the sole purpose of relieving charitable fever patients and to do all in our power to assist the municipal and other authorities in stamping out the epidemic. The committees are working as a single individual and all the reports to the contrary are absolutely false in every particular. We wish further to state that Mayor Kennedy is an honorary member ex-officio of the executive committee, and is acting in perfect harmony in all matters.

POSSIBLE SEQUELÆ.

As is usual in epidemics of such magnitude as the one now raging at Butler, a considerable amount of secondary infection is to be feared. Already several nurses and physicians and others engaged in relief work have fallen victims to the disease, and even with the utmost precautions it seems not unlikely that cases of typhoid fever will continue to develop. The great attention being paid, however, to methods of thorough-going disinfection should go far to minimize the danger from this source.

Since the sewage of Butler is discharged into Connoquenessing Creek, and since several other communities further down the stream derive their water from this source, great concern has been expressed lest further infection of other communities might be brought about by this means. To forestall this possibility the State Board of Health promptly issued warnings to the towns located along the lower part of the creek, and so early and so great was the publicity given to the matter in this way that it is hoped that the further widening of the Butler calamity may be averted.

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TUBERCULOSIS CONGRESSES.

Last week we printed a communication which called attention to an unsatisfactory condition of affairs, which, while it has been appreciated by all who are acquainted with the facts, was and is being too much ignored by the profession as a whole. It is well known by those who have been giving attention to the subject that the so-called congress on tuberculosis, which has met for the past two or three years in New York, was controlled by those who did not have the confidence of the profession; that it was not noted for its scientific character, but rather for the chance it gave for the exploiting of advertising schemes, fads, etc.

At the last meeting of that "congress" a new set of officers was elected, and while these had not been recognized as authorities on the tuberculosis question, nevertheless it was thought that there was a promise of better things. A meeting was set for July, 1904, at St. Louis, but recently this has been changed to April, 1905, at Washington.

It soon developed, however, that the deposed officers of the former congress were attempting to get up another organization, and they are now arranging for a meeting to be held at St. Louis in October, 1904. The officers of this congress, called the "Bell Congress" by Knopf, have been extremely energetic, for they have not only succeeded in getting delegates appointed by the presidents of state medical societies and by the governors of the states, but have even obtained the sanction and indorsement of the United States Government, and through the State Department are obtaining the official support of our foreign representatives. According to a circular before us, official notification in regard to the "congress" has been sent to all our ministers and foreign representatives. Judging from a letter dated November 3, from the Assistant Secretary of State to Mr. Clark Bell, the letter copied below is "a copy of the instructions sent to Ambassador Choate. The instructions to France, Denmark and The Netherlands are *mutatis mutandis* in the same language." The following is the letter:

Sir:—The Department is informed by Mr. Howard J. Rogers, Director of International Congresses of the Universal Exposition to be held in St. Louis in 1904, that the American Congress on Tuberculosis has been placed on its list of official Congresses and that the dates for said Congress will be October 3, 4 and 5, 1904.

The Department is also advised by Mr. Clark Bell, Chairman of the Committee of Organization of the Congress, that the Executive Committee and Officers of the Congress have sent to the Government of each American Country an invitation for official representation by its Government, in the Congress; and the request is made of the Department to give such support to the invitation as it properly may.

The humanitarian object which this Congress has in view to reach, by the discussion of scientific men, some result in arresting the spread and averting so far as it may be found possible the ravages of this dreadful disease which now falls with such terrible force and fatality upon the people of the Western Hemisphere can not but enlist the sympathy and approval of the Government to which you are accredited.

The Department will, therefore, be pleased to have you say to that Government that this Government is in entire sympathy with its work and would be pleased to learn that the Government of ——— took a like interest in its success by the acceptance of the Committee's invitation, and the appointment of three or more scientific gentlemen to represent it at the Congress.

This Government would also be pleased if that of ——— could find it convenient to comply with the request of the Committee to give the matter publicity in order that it may come to the knowledge of interested organizations and public spirited Citizens of that Country. I am, Sir,

Your obedient servant,

&c., &c.

This letter, without referring to others, is sufficient to show how seriously and earnestly the United States Government has endorsed the movement. The fact that these people have succeeded in obtaining the support of the Government is unfortunate, for as a natural result physicians of foreign countries interested in the subject will be led to come to this congress. If, having come so far, they find that the "congress" is not supported by the better element of the profession—by those prominent in tuberculosis work in the United States; if, to use a familiar expression, they find the play of Hamlet with Hamlet left out, they will feel that they have been imposed on. The results will not be complimentary to us, but will in a measure reflect on the medical profession of the United States, irresponsible as it is for the conditions.

We are neither ready, nor is the time opportune for an international congress on tuberculosis. But when we have one, let it be one that shall have its inception in some reputable and recognized body; one that shall have the indorsement and support of the profession, and especially of those who are recognized as authorities on the subject; one whose utterances shall be authoritative and command respect, and one that shall redound to the credit of America and of which Americans can be proud.

We believe that those who are working in behalf of the organization known as the Lewis-Brown congress are animated by pure motives, and by the belief that its contemplated meeting will be beneficial. Nevertheless, we can not but think that under the circumstances it will be a mistake for them to go on. They have inherited with their "congress" all its former stigma, and the only way to get rid of the stigma is to quietly let the "congress" die and start anew. The title of the Lewis-Brown congress—The American Congress on Tuberculosis for the Prevention of Consumption—is too much like that of the Bell congress—The American Congress on Tuberculosis—and it will be impossible for

them to free themselves from the odium the name carries with it.

As far as the other congress is concerned, the so-called "Bell Congress," it seems to us that the time has come to do something more than simply ignore it. If it is to become a reality under conditions in which it can not receive the support and co-operation of those best qualified to represent the American medical profession in the discussion of the subject, and we believe such to be the case, it is well that the world should know the fact.

MARMOREK'S VACCINE AND SERUM FOR TUBERCULOSIS.

We called attention last week to the fact that Dr. Alexander Marmorek, until recently one of the laboratory chiefs of the Pasteur Institute, Paris, presented a paper to the Academy of Medicine on November 17, in which he described a vaccine and a serum for tuberculosis. The French medical journals containing full abstracts of the paper have now been received.

Marmorek will be remembered as the bacteriologist who, some ten years ago, discovered antistreptococcus serum, and whose investigations in bacteriology have been generally considered of great value. Since he began his studies on the serum for tuberculosis, owing to a difference of opinion with the other members of the staff of the Pasteur Institute, he has resigned his position there and this work has been carried out, and the paper presented, on his own responsibility. While his conclusions can not yet be accepted as proved, there is a possibility that he has made a discovery, or series of discoveries, of prime importance with regard to the toxin of tuberculosis and the biologic method by which the affection may be relieved if not eventually cured.

Marmorek began his present investigations convinced that tuberculin was not the true toxin of the bacillus of tuberculosis. The observations that it fails to cause any reaction in normal individuals, yet produces a marked reaction in those suffering from a mild form of tuberculosis, and only a slight reaction, sometimes none at all, in those suffering from the severer forms of tuberculosis, are a series of contradictions that can not, he holds, be reconciled on any theory of the action of this supposed toxin. Beside, the reaction after an injection of tuberculin usually does not occur for several hours and sometimes longer. Marmorek considers, then, that the rôle of tuberculin is to cause an excitation of any tubercle bacilli present, as a result of which they produce the toxic materials whose absorption brings about the febrile reaction. Tuberculin acts, to use his figure, somewhat as a key does in a lock unlocking the latent toxic powers of the tubercle bacilli present. With this view in mind Marmorek looked for another toxin of the tubercle bacillus and believes he has succeeded in finding it.

He considered it especially important to have the tubercle bacilli in his culture media maintain the staining characteristics which they originally possessed. Any modification of this he considered due to an alteration in their vitality. The only medium on which he could grow successfully these "primitive," as he calls them. tubercle bacilli, was a leucotoxic serum obtained by injecting the white cells of smaller animals into the calf. To this leucotoxic material was added bouillon made from the liver of animals and a slight amount of glycerin. The reason for using the liver bouillon is that this organ seems to be especially refractory to attack by the tubercle bacillus. Hence, Marmorek argues, when tubercle bacilli can be made to grow on liver bouillon, they retain their vitality and virulence to a marked degree.

Bacilli thus grown produce no tuberculin but do produce another toxin. Rabbits especially can be immunized against infection with tubercle bacilli by a properly directed dosage of this toxin. When thus immunized their serum is distinctly antitoxic. This is the serum which, produced in large quantities from horses, Marmorek has used in his observations on the cure of tuberculous animals, including human beings. While working at the serum he succeeded in producing also an antituberculous vaccine. When tubercle bacilli are treated for a long time with leucotoxic serum, and after being heated are added to the antituberculous serum, they are, when injected into animals, absorbed without the formation of abscesses and without causing any general infection. When thus injected they act as a vaccine against subsequent tuberculous infection. The immunity thus obtained has lasted in the rabbit for two months to date.

With tuberculous animals, Marmorek asserts that he has obtained excellent results with his serum. While control animals died or became very ill from tuberculosis, those treated by the serum or the vaccine developed no tuberculosis, or quickly recovered from the incipient stages of experimental tuberculosis. With regard to human beings, his results, he says, are quite as promising, though, necessarily from the limitations of the experimental method, not as definite. At first, of course, he was able to secure for treatment only very far advanced cases. In a number of cases of tuberculous meningitis there was a prompt improvement of symptoms after the injection of the serum, the pulse and temperature were reduced, the paralysis became less marked, even the coma came to an end. But none of the patients survived ultimately the ravages of the disease. In advanced cases of tuberculosis of the lungs, even when there existed cavities and abundant expectoration containing many bacilli, the improvement was very marked and some patients have even been apparently cured, though, of course, a sufficient length of time has not yet elapsed for the definite announcement of a cure.

In surgical tuberculosis, that is, of the bones, the lymph glands, the intestines and the peritoneum, some encouragingly satisfactory results were obtained. Complicated cases of Potts' disease with fistulas and abscesses, and even in one case with paralysis of the lower limbs

apparently due to pressure of a tuberculous process on the cord, were treated, Marmorek asserts, with prompt relief of symptoms. In the affection which may be considered on the borderline between medicine and surgery, tuberculous pleurisy, the effect of injections of the serum was very marked. Out of 7 cases, 2 of them in little children, 6 improved at once, showing a rapid diminution of the transudate associated with a very free secretion of urine and a termination by what Marmorek considers a urinary crisis.

In more than 2,000 injections, there seems to have been no untoward symptoms observed; only three times was there a local abscess. The serum is said to cause no fever and no other local or general reaction occurs. Hectic fever is affected favorably by the antituberculous serum after two or three injections. Far from fever being a contraindication to the use of the serum, it is this class of cases particularly that Marmorek has preferred to treat, since the demonstration of the antifebrile action of the serum is a prominent feature of the treatment. Marmorek does not consider that his results are absolutely conclusive, but contends that there is no longer any doubt that the method is worth while trying extensively.

The fact that Marmorek's former colleagues in the Pasteur Institute discredit the results, at least to a considerable extent, is sufficient to make us receive these reports with some caution, and we shall wait for further developments before expressing any opinion in regard to this discovery and its value in tuberculosis. The announcement, however, is one of considerable interest as it stands and we, therefore, are glad to furnish it to our readers.

SUGAR METABOLISM AND DIABETES.

When Pawlow demonstrated that pancreatic juice as secreted into the intestine in an inactive form is rendered active by another ferment, *enterokinase*, secreted by the intestinal mucosa, he did more than give a new light on the processes of digestion in the intestine, important as that contribution was. He also pointed the way to new researches that might show other examples of the interdependence of organs and cells. One of the fruits of this research seems to have matured in the very important discovery of O. Cohnheim[1] concerning the mechanism and the agents concerned in sugar metabolism, apparently a discovery that clears up at last one of the most fundamental processes of metabolism which has evaded solution in spite of much work directed to that end. It is indeed strange that the history of sugar in the body has not been completely worked out long ago, in view of our familiarity with its chemical properties and structure, and the large quantities that the body daily utilizes. We have long been familiar with certain steps in its metabolism, knowing that in whatever form it is ingested it is absorbed as a monosaccharid; that a fairly constant amount is maintained in the blood through the ability of the liver and muscles to convert any excess into glycogen and to restore it whenever there begins to be a deficiency; and also that if the sugar in the blood greatly exceeds the normal amount it begins to escape into the urine. We also knew that sugar was the chief source of heat and energy, which it furnished by undergoing destructive oxidation; and as the chief place where heat and energy is produced is in the muscles it was probable that the oxidation took place within the muscle cells. Yet experimentally it had not been possible to demonstrate any such property in muscle tissue. It was known that glycolytic ferments exist that have the power of destroying sugar, but extracts prepared from muscles in various ways were found to have no such property, or at least not enough to begin to account for the enormous destruction of sugar that the body accomplishes every day. And so, despite the apparent certainty that the muscle tissue was the seat of an active glycolysis during life, the agents concerned could not be found within them by experimental means.

Another set of facts implicated the pancreas, beginning with the classical observations of von Mering and Minkowski that removal of the pancreas led to severe glycosuria in the lower animals, up to the recent observations of our American scientists—Opie showing that of the different elements of the pancreas, the islands of Langerhans are the chief and probably the sole structures concerned in human diabetes, and Herter, that reducing bodies of any kind applied to the pancreas cause the appearance of sugar in the urine. It was also known that in animals in which the pancreas is thrown out of function, as well as in human pancreatic diabetes, the sugar accumulates in the blood instead of being oxidized, and from this accumulation results the glycosuria. Evidently, then, the pancreas is essential for the oxidation of sugar, and it might well be imagined that among the many enzymes it produces is one that has this property, but as with the muscles it has been impossible to demonstrate any such enzyme in the pancreas. It remained for Cohnheim to put these facts together; considering the peculiar change brought about in a pancreatic zymogen, trypsinogen, by the action of another ferment contained in the succus entericus, whereby the inactive zymogen is converted into trypsin, he came to appreciate the possibility of some similar interrelation of pancreas and muscles. Experiments were made along the lines thus suggested, with most successful results. It was readily demonstrated that although extracts of either pancreas or of muscle made by expressing the juices of the cells by a powerful press, were practically without effect on glucose when each was taken alone, yet when combined the resulting mixture was able to destroy the sugar rapidly and in time completely. Furthermore, the amount and rate of glycolysis shown by muscle extract is sufficient to account

1. Hoppe-Seyler's Zeitschrift f. Physiol. Chemie, 1903, xxxix, 336.

fully for all the oxidation of sugar accomplished by the body during the day.

Putting together all the facts now acquired it would seem that in the islands of Langerhans is formed a substance which is like a ferment in nature, as it is destroyed by heat. This substance passing to the muscles through the blood stream meets in the muscle cells another ferment or proferment, and between them a reaction occurs resulting in the formation of a ferment that has the power of rapidly destroying sugar. This is similar to the activation of trypsinogen by the intestinal product, enterokinase, and in turn it has been shown by Delezenne that the reaction of enterokinase and trypsinogen is quite similar to the combining of complement and intermediary body as it occurs in the cytolytic and bacteriolytic serums. It would seem, therefore, that in pancreatic diabetes we have an absence or a deficiency of the specific secretion of the islands of Langerhans that is necessary to make the glycolytic substance of the muscles active. Of course, this does not exclude the possibility of a similar combined effect with substances in any other tissues of the body where sugar is burned. The unknown ferment that results from the action of pancreatic and muscular zymogens seems to be specific for dextrose, for in diabetes other sorts of oxidations seem to be impeded little if any. As Cohnheim's results, which seem to be unquestionable, are amplified, and we know more about the intermediate steps and the places of normal glycolysis, as well as the nature of the pancreatic and the muscle agents implicated, it is probable that we shall understand better than was possible before the essentials of the pathogenesis of human diabetes.

Perhaps the most remarkable thing about Cohnheim's discovery is its simplicity, the usual characteristic of real discoveries. For years physiologic chemists have been trying to put the sugar destruction on the pancreas or on the muscles, knowing each to be concerned, but in vain. Why it had not before occurred to any one that it might be the work of the two together is the chief mystery. Now that the suggestion has been made and followed out the entire difficulty clears up, and we have a most reasonable and simple explanation of a long perplexing problem, as well as a new field for fruitful research.

DERMOID CYSTS AND TERATOMAS OF THE ANTERIOR MEDIASTINUM.

It is in the diagnosis of obscure pathologic conditions that the physician of unusual ability is distinguished from the ordinary physician. Among such conditions may certainly be mentioned the dermoid cysts and teratomas of the anterior mediastinum. Dangschat,[1] an assistant in Garré's clinic in Königsberg, gives practically all the information obtainable on this subject up to this date. He reports two cases operated on in the Königsberg clinic and has collected from the literature forty-four similar cases. Only two of these are from American journals, one reported in 1879, and three others are mentioned from English sources.

Various theories have been advanced to account for the origin of these tumors. The origin by direct embryonic inclusion, by development from the thyroid or thymus or from the gill-slits, Dangschat rejects on the basis of careful examination of the material obtained at operation in these cases. The new growth contains tissue which had its origin in all three of the germ layers, and he believes that this makes *inclusio fœtus in fœto* the only possible origin. The chief danger from such inclusions is through the rapid growth of their contents with degeneration of the walls surrounding them, and the symptoms generally first appear at about the time of puberty. The growth usually continues for several years and is much slower than that of sarcoma and carcinoma. Difficulty in breathing is the most important symptom of these dermoids, and with it there is often considerable pain. In a considerable proportion of cases there was cough and expectoration, and in a few cases spitting of blood. As the growth increases in size the prominence of the chest wall is noticeable. Earlier in the disease the picture may resemble that of tuberculosis of the lungs, but at a later stage the diagnosis would lie between pleurisy with effusion, aneurism, echinococcus, and actinomycosis. The finding of hairs in the sputum furnishes positive diagnostic proof. In many other cases puncture with an aspirating needle would clear up the diagnosis.

When the history leads to a probable diagnosis of dermoid cyst, operation should be undertaken. The aneurismal bruit and the symptoms of inflammation in actinomycosis would probably leave little doubt as to the differential diagnosis from these conditions. The prognosis is absolutely unfavorable unless a timely diagnosis is made and suitable operation undertaken. The operation in most cases necessitates resection of several ribs, or of the sternum, an evacuation of the cyst and suture of the remaining cyst wall into the opening. The cavity then is scraped with a curette or treated with caustic and left to close by granulation. In three of the cases out of forty-four death followed the operation, in one case from hemorrhage, in the second from infection, and in a third from an unknown cause. The remaining patients were either cured or improved.

In several abstracts of cases which Dangschat gives, the cavity left after operation was of very large size. Such cavities could hardly be expected to close after operation unless something further were done. It would seem that in such cases the cavity might sometimes be partially or entirely closed by turning in large skin flaps from the surrounding region after the wound was well covered with healthy granulations. Failing in this the use of large Thiersch skin grafts might be considered.

1. Beiträge zur klin. Chirurg., 1903, xxxviii, p. 692.

THE OWNERSHIP OF THE PRESCRIPTION AGAIN.

The newspapers announce that a druggist in New York was recently compelled to deliver a prescription to a patient, the latter claiming that he was entitled to it, and the claim being upheld by a lower court. This has started the vexed question on its rounds again and the newspapers are, as usual, deciding the matter for us. At times the question as to who owns the prescription is an important one, not only for the physician, but for the patient. For instance, if a physician writes a prescription that contains an ingredient that may be harmful if its use is continued, it is very important that he should have the right to say whether it should be refilled, or whether it should be delivered to the patient. The fact is, after all is said about the matter, the prescription is simply a letter—a note—to the chemist instructing him to do certain things. The physician may write this letter in the common prescription form or he may send a note addressed to Mr. Brown, the druggist, asking him to give the bearer, Mr. Smith, an 8-ounce bottle of compound syrup of sarsaparilla. There is no reason why the patient should have this letter back, any more than if he were given a letter to a merchant asking that he let Mr. Smith have any specified article. Again, the physician may, and often does, telephone to the druggist telling him to put up a certain combination for Mr. Smith, who will call. Or, he may send his office-boy to the druggist with a verbal message for medicine for Mr. Smith, or he may give Mr. Smith medicine direct from his own office stock. The fact is, no one owns the prescription. The druggist has no right to give it to anyone without the physician's direction, and he has no right to refill it without the physician's orders. One newspaper, as an argument to show why the patient should own and have the prescription, says that some prescriptions are very valuable and, having to pay for it, the patient is entitled to it, not only to use for himself, but for his friends. This is a splendid argument, but on which side it should be placed depends on the point of view.

THE CASE OF THE "MODERATE DRINKER."

In a recent inquest in New York, according to press reports, a man has been declared as having died of "refined alcoholism." He was suddenly stricken after a surgical operation and died from what was alleged to be delirium tremens. He had been supposed to be of temperate habits, taking only moderate drinks at morning and night, but it would appear that his system had become disorganized, if not saturated, by the agent and the effects on the nervous system were such as to bring about these results. The verdict may have been a correct one, and based on facts presented. It has long been recognized that alcohol in any dose is not a safe prescription for certain constitutions, but its possibilities of danger have seldom been fully realized. The fact that a large number of persons can apparently thrive while more or less under its influence is no proof that this is the case with all and it is probable that if we had all the facts in every case we would find that those who appear to do well under its habitual use are really none the better for it. Like other poisons, it produces in some constitutions a sort of habituation. In still other cases the resistance is so strong that its effects are not manifest, but may appear later in transmission to offspring. That alcohol is an influence for good in certain cases is undoubtedly true, but the assertion that it adds to the sum of human happiness can be reasonably criticised. It would indeed seem absurd in view of the immense amount of evil that it creates, but with the almost universal use of alcohol throughout the world in some form or other its advocates have certain specious grounds for their position. Nevertheless it may be, like certain diseases which are accompanied with a special euphoria, as damaging in one case as in another. If all men could get the exalted delusions of paresis the sum of human happiness would certainly be greatly increased for a time, but it would only mean irreparable damage to the nerve centers. We may say the same of the pleasures of alcohol, and if it is dangerous to the system, is followed by reaction and tends to racial and individual degeneration, all these things ought to be considered before we speak of its advantages.

Medical News.

MARYLAND.

Epidemic Ends.—Dr. J. H. Drach, Butler, health officer of the Mount Carmel district of Baltimore County, reports that the diphtheria epidemic there is at an end, and that no further deaths have been reported. The epidemic was much aggravated by a dread of antitoxin for a time by the people.

The Same Old Disease.—A "mysterious contagious disease," variously diagnosed as "smallpox," "chicken-pox" and "Cuban itch," has been prevailing for some weeks in Frederick, Clarke and Jefferson counties, just across the Maryland border. Whole communities are in quarantine, and it is being treated as smallpox.

Requested Not to Spit on Sidewalks.—A committee, consisting of Drs. James W. Humrichouse, Hamilton K. Derr and Luther H. Keller, of the Washington County Medical Society, appeared before the mayor and city council of Hagerstown, December 3, and asked that placards be placed on the street corners, public buildings, street cars, etc., requesting the people not to spit on the sidewalks and floors.

Personal.—Dr. Elijah Williams, Armiger, Anne Arundel County, formerly state senator, has been appointed school commissioner, vice James E. Tate.——The Baltimore county commissioners have appointed Dr. Thomas C. Bussey, physician of the almshouse, and Dr. J. Royston Green, physician of the county jail.——Dr. Samuel T. Heffner has been elected clerk of the Circuit Court of Frederick County.——Dr. George Wells has been re-elected clerk of the Court of Appeals at Annapolis.

Baltimore.

Typhoid at Army Post.—There are eleven enlisted men at Fort McHenry ill with typhoid fever.

Senses Hospital Incorporated.—The tenth Baltimore Eye, Ear, Nose and Throat Charity Hospital was incorporated, December 3, with Drs. James Bordley, Jr., and Harry E. Peterman as attending surgeons. A central site will be selected for the institution.

Appropriations for State Institutions.—The state institutions have put in application for state aid, with the Board of State Aid and Charities, amounting to $2,724,990 for the next two years. The amount now being received by these institutions for the same period is $1,293,382.

November Mortality and Morbidity.—The mortality report for November shows 756 deaths. Pulmonary tuberculosis leads with 102; next comes pneumonia, with 94; heart disease, 69; Bright's disease, 67; cancer, 27; diphtheria, 21, and typhoid fever, 19. Diphtheria and scarlet fever were the most prevalent infectious diseases.

Thousands for Charity.—Nine thousand one hundred and fifty-six dollars was realized for charity at the annual banquet

of the Hebrew Benevolent Society December 3.——A Christmas sale for the benefit of the Crippled Children's Hospital was held at the Arundel Clubhouse December 4 and 5.——The fair held at University Hospital last week by the Ladies' Auxiliary realized more than $1,700.

Reappoints Medical Department Staff.—Dr. James Bosley, health commissioner, has reappointed the medical officers of his department, including Dr. C. Hampson Jones, assistant commissioner; Dr. W. Royal Stokes, bacteriologist; G. W. Lehman, chemist; Dr. Nathaniel G. Keirle, medical examiner; Dr. Bernard P. Muce, assistant examiner; Dr. Alan W. Smith, throat inspector; Dr. Sydney O. Heiskell, quarantine physician, and Dr. Thaddeus W. Clark, assistant quarantine physician.

Personal.—The governor has reappointed Dr. William H. Welch president of the State Board of Health.——Dr. Albert D. Foster of Detroit has assumed charge of the immigrant service of this port and has reported for duty as surgeon, vice Dr. W. M. Glover, transferred to Victoria, B. C.——Dr. William N. Bispham, post physician at Fort McHenry, has been ordered to take charge of the hospital at Fort Logan, Colorado. He will be succeeded by Capt. Edward R. Schreiner of Fort Howard.

Munificent Bequests.—Mr. William Wyman, the benefactor of the Johns Hopkins University, through whom that institution received one year ago a magnificent tract of land in the northern suburbs, and a contribution of $1,000,000 from the community, died last week. By his will he leaves his entire estate, estimated at $500,000, less $108,000 in special legacies, to his daughter, who is a widow, and in the event of her death to Johns Hopkins University.

Filtration System Recommended.—A special sewerage report, submitted to the mayor and board of estimates by the city engineer and water engineer, recommends the filtration system at an expense of $6,000,000. The commission estimates that not over 50 per cent. of the water consumption will get into the sewers. The estimate is for a million population, and provides for the present only pumping machinery, discharge mains and filtration fields for 600,000, which is slightly in excess of the population of the city. "Each property should only be directly charged with the cost of the necessary connection from the house to the sewer, as is now done with the water service."

MASSACHUSETTS.

Sewage Disposal.—The city council of Fitchburg has voted the sum of $445,012 for the construction of new sewage disposal beds.

Insane Hospital Reports.—The Worcester Insane Hospital reports a daily average of 1,125 patients; $83,700 is asked of the legislature for needed additions and alterations.

How Scarlet Fever is Spread.—Two cases of scarlet fever, so mild that they were not discovered till the "peeling" stage, have caused a large series of cases in West Springfield.

Scarlet Fever Closes School.—The illness of a teacher with scarlet fever in the high school at Danvers, together with the unusual prevalence of the disease, has closed the school for the present.

Physician and Nurses Exonerated.—The trustees of the State Hospital at Tewksbury have decided that the recent poisoning of several men by belladonna or atropin was the result of the act of some degenerate or criminal inmate. The nurses and physicians are completely exonerated.

Anthrax Treated at Lynn.—Of the four cases of anthrax recently treated in Lynn, three patients recovered. One of these refused operation with free excision employed in treating the others, and received instead carbolic injections under the skin and mercuric chlorid applications wet and dry.

Leaves Estate for Hospital.—Stephen Symmes left his estate to the town of Arlington for the establishment of a hospital. As the location proved to be unsuitable, the Supreme Judicial Court gave permission to sell the property, and the $4,700 thus realized will be employed toward the erection of a hospital.

Tuberculosis Fund Exhausted.—The Massachusetts fund to pay farmers for tuberculous cows condemned by the state cattle bureau has been exhausted. As a result 200 diseased cows have been released from quarantine. No further work can be done till a new appropriation is secured from the next legislature.

Spring Water Causes Typhoid.—The occurrence of a number of cases of typhoid fever in Springfield, Mass., recently noted, led to sending samples of "spring water" sold in the city to the State Board of Health for analysis. Their report absolutely condemns seven springs, five of them located in the public park system. Several other springs are below standard and the owners have been warned. Springfield has a good municipal water supply, but owing to the color of the water many citizens have been buying their drinking water from the owners of these contaminated springs. The epidemic of typhoid was promptly checked by the measures taken by the local health board.

The Williamstown Epidemic.—The report of Dr. George A. Soper, the sanitary engineer of the New York Board of Health, summoned to Williamstown by President Hopkins, shows that the recent outbreak of typhoid fever at Williams College was caused by infected cream eaten with breakfast food. The can of cream was placed in a vat of contaminated water to cool, and became itself accidentally infected.——The final step in regard to the typhoid fever at Williamstown has been for the boards of health of that town and of North Adams, which adjoins, to call on the State Board of Health. Drs. S. L. Morse and William S. Johnson have accordingly been sent to investigate thoroughly the typhoid situation in both places.

Boston.

The "New Boat" Fund of the Boston Floating Hospital has reached $5,895.

Bequest.—George O. Smith left by will $5,000 to the Massachusetts General Hospital.

Music at Hospitals.—During December musicians employed by the Hospital Music Fund will visit the Woman's Charity Club Hospital, New England Baptist Hospital, and the Children's Hospital.

Building Nearly Ready.—The new building for the Industrial School for Crippled and Deformed Children, in which many Boston physicians are interested, located on St. Botolph Street, near Massachusetts Avenue, is nearly completed. The quarters on Newbury Street have been overcrowded for more than three years.

Hospitals Benefit.—By the will of George W. Boyd of Boston the Children's Hospital receives $5,000.00; the Maine General Hospital $7,500, and under certain conditions the Massachusetts General Hospital $25,000. The residue, which is likely to amount to about $100,000, will be distributed to charitable organizations at the discretion of the executors.

The Convection of Typhoid.—C. E. A. Winslow reported before the last weeting of the Boston Society of Medical Sciences that examination of the hands of school children, students and servants showed the presence of colon bacilli in from 5 to 10 per cent. of the individuals examined. The experiment was used as a side-light in the way in which typhoid bacilli are transferred from case to case.

Death and Disease.—The total number of deaths in Boston for the four weeks ended December 5 was 763, 75 less than in the corresponding period last year. The annual death rate was therefore 16.48 per 1,000. Of these deaths 100 are from pneumonia, 3 from whooping cough, 100 from heart disease, 28 from bronchitis, and 15 from marasmus. There were reported 238 cases of diphtheria, with 22 deaths; 131 cases of scarlet fever, with 1 death; 77 cases of typhoid fever, with 16 deaths; 474 cases of measles, with 9 deaths; 128 cases of tuberculosis, and 90 deaths, and 1 case of smallpox.

MINNESOTA.

Hospital Incorporated.—St. John's Hospital, Red Wing, has been incorporated with a capital stock of $35,000.

Smallpox.—For the week ended November 23, 28 cases of smallpox were reported, 10 of which were from Maine Prairie Township, Stearns County.

Campaign Against Tuberculosis.—A committee on organization to carry on the fight against tuberculosis in Minneapolis and St. Paul, has been appointed, consisting of eleven physicians and five laymen, with Dr. Henry M. Bracken as chairman.

To Placard Consumptive Homes.—An ordinance prepared by Dr. E. H. Whitcomb, assemblyman of the St. Paul City Council, provides that all physicians shall report cases of tuberculosis to the health commissioner. Houses where consumptives have died or from which they have moved will be placarded with the information that they are infected. The ordinance will be proposed for passage.

NEW HAMPSHIRE.

Unregistered Practitioner Fined.—Ferdinand Alfred Trudeau, Somersworth, was arrested, November 11, charged with the un-

authorized practice of medicine. He pleaded guilty, was sentenced to imprisonment for three months in the county jail, and to pay costs, and the sentence was suspended on promise of good behavior.

New Hospital.—Exeter is to have a fine new hospital at a cost of $20,000. Plans have already been accepted for a brick building of two stories in height, with two long wings one story high, one for medical, the other for surgical cases. Broad connecting corridors and wide verandas will join the buildings and furnish out-of-door protection for isolation and fresh air.

Many Offices for One Man.—The mayor of Nashua, in investigating a suit brought against the city by Dr. Charles E. Congdon to recover $1,625 claimed to be due for services rendered, states that he has discovered that the plaintiff was drawing four different salaries and holding four different offices at the same time, namely: city physician, $500 per year; member of the board of health, $100 per year; physician in charge of smallpox patients, $10 per day, and inspector for the board of health, $3 per day.

Urge State Sanatorium for Consumptives.—At its 84th annual meeting held in Lisbon, November 12, the White Mountain Medical Society unanimously adopted the following preamble and resolution:

WHEREAS, From 75 to 80 per cent. of the people affected with consumption are among the poor, who are unable to place themselves under scientific medical and sanitary treatment, without help, and whereas the only hope of such help is through state aid, and

WHEREAS, As this is a question of utmost importance to physicians, humanitarians, and in fact all people who are interested in the welfare of the state, be it

Resolved, That the White Mountain Medical Society emphatically endorses the movement looking towards the establishment of a state institution for the cure and treatment of this class of unfortunate human beings.

NEW JERSEY.

Personal.—Dr. J. Alexander Browne has been elected health officer of Paterson, vice Dr. Bryan C. Maginnis.——The governors of the Atlantic City Hospital have appointed Dr. W. W. Miller, Philadelphia, a graduate of Jefferson Medical College, resident physician, to fill the vacancy made by the resignation of Dr. Milton Ireland.

The Mosquito Must Go.—A national anti-mosquito association is announced to be organized at a meeting, December 16, under the auspices of the governor of the state. Representatives of the Department of Entomology at Washington, and delegates from several states are expected to be present. Plans are to be formulated for the extermination of the pest.

To Regulate Barbers.—The Atlantic City Board of Health has adopted rules for the proper regulation of barber shops, which in brief are as follows: Barbers must wash hands before attending each patron; styptics to be used in powder only; no powder puffs; towel for one person only; no sponges; mugs and brushes washed after each use; combs, razors, etc., cleansed after each use; floors swept or mopped every day; hot and cold water in every shop, and conspicuous display of regulations in each shop.

Officers Elected.—At the annual meeting of the William Peirson Medical Association of Essex County, the following officers were elected: President, Dr. Thomas W. Harvey, Orange; vice-presidents, Drs. Richard C. Newton, Montclair, and Joseph C. Young, Newark; secretary, Dr. Richard D. Freeman, South Orange; treasurer, Dr. John H. Bradshaw, Orange; librarian, Dr. Henry A. Pulsford, South Orange, and council, the officers, and Drs. William B. Graves, East Orange, Mefford Runyon, South Orange, and Theron Y. Sutphen, Newark.

Epidemics.—Diphtheria is said to be epidemic at New Brunswick, where 35 cases have been reported. It is asserted that the epidemic originated in the concealment, by a physician, of the first case.——A "strange disease, resembling scarlet fever, but more rapid in causing death," is said to be raging in Helmetta. Seven deaths have occurred, the public schools have been closed, and an isolation hospital has been established.——Four cases of smallpox have been discovered in a tenement house in Hackensack.——Camden has four cases of smallpox in its isolation hospital.

NEW YORK.

Epidemic Feared.—An epidemic of diphtheria is feared at Inwood, Long Island, where nine cases have occurred, with two deaths.

Personal.—Dr. Edward F. Brush, mayor of Mount Vernon, has appointed Dr. Archibald M. Campbell, president of the board of health.

Octogenarians Still Practice.—Syracuse has four physicians each more than 80 years old who are still in practice. They are Drs. Alexander Jones Dallas, a graduate of 1844, Edwin Robinson Maxson and Alfred Mercer, who began practice in 1845, and Henry Darwin Didama, who has been in practice only since 1846.

Smallpox.—The State Health Department, on November 28, issued a list showing the prevalence of smallpox and stating that health officers are generally alive to the situation, but receive indifferent support or actual opposition from local boards and citizens in the enforcement of vaccination and quarantine. At Medina there are 92 cases, and one or more cases are reported from 12 other places.

Authorities at Variance.—Dr. Charles S. Howard, president of the board of managers of the Elmira Reformatory, says that there were 80 cases of diphtheria during a certain period; Superintendent Robertson avers that there were but 53. Dr. Howard believes the typhoid epidemic was caused by city water, used when the reformatory plant was out of order, but Dr. Robertson stated that the water used was filtered.

New York City.

Pneumonia Death Increase.—An alarming increase in the pneumonia death rate in Greater New York, is reported for the week ended November 28, as compared with the corresponding week of 1902.

Personal.—Dr. Louis Schaefer, house surgeon at St. Catherine's Hospital, Brooklyn, on completing his term of service was given a dinner by his associates at the hospital. He is succeeded by Dr. Frank D. Jennings.——Dr. Francis H. Miller, Brooklyn, was painfully injured in a runaway accident December 1.——Dr. Lawrence J. Gerald, of the medical staff of the Long Island State Hospital, has been appointed assistant surgeon at the Soldiers' Home, Bath.

German Hospital Library Fund.—The physicians of the German Hospital and Dispensary, after striving for over thirty years to collect valuable medical books, decided that it was best to dispose of the library. It was accordingly sold to the Kings County Medical Society for $3,000, and this sum was then presented to the New York Academy of Medicine with the understanding that it should be known as the German Hospital and Dispensary Library Fund.

Hospital Items.—The new Plant Pavilion to be added to St. Luke's Hospital is to have the innovation of a roof garden.——The report of the experimental hospital on North Brother Island for the treatment of consumptives is very encouraging. Of the 127 cases admitted to the institution since May 8, 84 have been discharged.——Memorial Hospital, Brooklyn, took possession of its new quarters November 15. It has accommodation for twenty patients.——St. Vincent's Hospital, West New Brighton, Staten Island, was formally opened November 26. The site and buildings cost $35,000.——A new laboratory building and dormitory for Willard Parker Hospital, are planned to cost $100,000.

Buffalo.

The Meltzer Reception.—A reception was tendered to Dr. Samuel J. Meltzer, New York, by Dr. Matthew D. Mann, dean of the medical faculty of the University of Buffalo.

Army Surgeon Buried.—Dr. Charles A. St. John was given a military funeral November 28. He was a contract surgeon in the Army and fell in a skirmish in the Philippines. Although his death occurred two years ago his body reached Buffalo only this week.

PENNSYLVANIA.

Village in Quarantine.—The village of New Benton has been quarantined by the State Board of Health because of the refusal of the authorities to take steps to stamp out smallpox.

The Butler Disaster.—The epidemic of typhoid fever at Butler is fully treated in the Special Article on pages 1476 and 1477 of this issue, written by our special commissioner sent to Butler.

Dr. Pryor in Philadelphia.—On invitation of Dr. John M. Fisher, president of the Philadelphia Obstetrical Society, Dr. William R. Pryor, New York, delivered an address on "Puerperal Sepsis" before that body. He was afterward entertained at a dinner, and a reception and smoker were given in his honor.

Free Lectures on Hygiene and Sanitation.—Under the auspices of the Academy of Natural Sciences, Philadelphia, a series of free lectures on hygiene and sanitation is being given by Dr. Seneca Egbert, professor of hygiene in the Medico-Chirurgical College. The series includes lectures on the fol-

lowing subjects: Hygiene of the Individual; Hygiene of the House; Hygiene of the City and State; Sanitary Education of the Citizen.

Contagious Disease in Philadelphia.—The number of new cases of smallpox has been increasing gradually from week to week. For the week ended December 5 there were 99 new cases with 15 deaths. The department of health continues its crusade of vaccination; the hospitals urge vaccination on all their patients; firms plan to have their employes vaccinated; the press advocates vaccination, but still many foolishly refuse protection. As convincing evidence of the value of vaccination, it is a fact that with the prevalence of the disease few, if any, cases have occurred among the crowded foreign population, they having been compelled to be vaccinated before or at the time of immigrating. Director Martin says that of the many cases at the Municipal Hospital none had been vaccinated. There were also for the week a large number of new cases of other contagious diseases: of diphtheria, 93; scarlatina, 126; typhoid fever, 91. There are in the city a large number of cases of influenza of moderate severity.

VERMONT.

College Burned.—The medical college building at the University of Vermont, Burlington, was burned to the ground, December 2. The loss of $20,000 is covered by insurance.

Much Diphtheria and Scarlet Fever.—On account of the prevalence of diphtheria and scarlet fever in Brattleboro, the public schools have been closed for two weeks.——A case of smallpox in Wilmington has led the selectmen to close the schools and to forbid all public gatherings for a period of two weeks.

College Opens.—The exercises preliminary to the opening of the fifty-first year of the medical department of the university were held, November 28. Addresses were made by President Buckham, and by Dr. William M. Bryant, Ludlow, president of the state medical society, whose subject was "The Ideal Physician."

Unvaccinated Teacher Recovers Salary.—Miss Rose Murray, a teacher in a district school, in which smallpox broke out, who had never been vaccinated and was on that account suspended, has sued the town of Bennington for wages and costs amounting to $56. On November 7 she secured judgment against the town.

State Society Meeting.—The ninetieth annual meeting of the Vermont State Medical Society was held at Bellows Falls, October 14, 15 and 16. The following officers were elected: President, Dr. William N. Bryant, Ludlow; vice-president, Dr. Patrick E. McSweeney, Burlington; secretary, Dr. George H. Gorham, Bellows Falls; treasurer, Dr. Bingham H. Stone, Burlington; auditor, Dr. John H. Blodgett, Saxton's River; board of license censors, Drs. Henry James, Waterbury, Schuyler W. Hammond, Rutland, and J. Sutcliffe Hill, Bellows Falls, and Dr. Henry D. Holton, Brattleboro, delegate to the American Medical Association. The society will meet next year in Rutland.

GENERAL.

Outdoor Tuberculosis Camp for Navy.—Pensacola, Fla., climate having been recommended for consumptives, the Navy will establish a camp there and treat tuberculosis patients by the open air and forced food methods of treatment.

Personal.—Dr. H. C. Sloggett has been appointed medical superintendent of the Hawaiian Territory Insane Asylum. Dr. W. H. Mays has been in temporary charge.——Dr. C. R. McLean was appointed government physician for Lihue and Koloa, succeeding Dr. E. S. Goodhue, resigned.

American Association of Life Insurance Examining Surgeons.—The annual meeting of this association will be held at Atlantic City, N. J., June 6, 1904, under the presidency of Dr. Charles Lyman Greene, St. Paul, Minn. Dr. Denslow Lewis, Chicago, is chairman of the executive committee.

CANADA.

New Montreal Hospital for Contagious Diseases.—The plans of the new Alexandra Hospital have been accepted. It will be erected soon at Point St. Charles, and will cost $100,000.

Personal.—Dr. John W. Scane has been appointed registrar of the Faculty of Medicine of McGill University, Montreal, in succession to Dr. von Eberts, who resigned a short time ago. Dr. Scane recently has been an assistant to the professor of physiology.

Poisonous Drugs Used in Liquors.—The attention of the dominion government and of the Quebec legislature is to be directed to the allegation that poisonous and deleterious drugs are at present being used in the compounding and manufacture of liquors in that province.

McGill To Have Physiology Course Enlarged.—Principal Peterson of McGill University announces that there will very shortly be established a new faculty making physiology as much of an arts subject as it is now one of medicine. In time it is hoped to construct a new building for this faculty.

Annual Report Notre Dame Hospital, Montreal.—During the past official year 2,433 patients were treated, with a mortality of 7.6 per cent. In the out-patient department there were 21,245 consultations, and over 1,000 ambulance runs. The financial affairs were satisfactory, there being a balance to the good of $4,731. The contagious hospital in connection with this institution will be erected in the spring, and a new four-story hospital building in the form of a cross will soon follow. The plans for the latter structure are ready.

Kingston Hospital Troubles.—The board of governors of the Kingston, Ont., General Hospital, on the resignation of Medical Superintendent Haig, who has gone to England, appointed a woman without medical training as superintendent, stating that financial conditions would not permit the appointment of another salaried male superintendent. The three house surgeons are said to have then resigned in a body, refusing to take their orders from anyone but a properly qualified medical man. The medical members of the board strongly opposed the doing away with a medical superintendent.

FOREIGN.

Virchow's Library.—The most valuable portion of Virchow's library has been presented by his widow to the library of the Berlin Medical Society. These six or seven thousand volumes are to be kept separately as the Virchow collection.

The Austrian Trouble.—At the first session of the Austrian parliament protests against the recent aspersions cast on the medical profession were presented by three separate groups of members. The Vienna professors against whom the denunciations were made, to which reference has been made in these columns recently, are all of Jewish extraction, and the whole trouble is probably mainly the result of antisemitic agitation.

The Widal Test in School Inspection.—The German authorities have recently issued a notice to the effect that children suspected of typhoid may have a drop of blood taken from the ear or finger for the Widal test by the medical inspectors, but the consent of the parents must first be obtained and the school authorities notified. Compulsory enforcement of this diagnostic measure must not be permitted under any circumstances.

Personal.—Dr. A. P. Peck, missionary in China of the American Board of Commissioners for Foreign Missions, has been appointed by the Chinese government medical officer in charge of the quarantine station at Taku.——Dr. J. N. Langley has been elected professor of physiology at Cambridge University, England, as the successor of Sir Michael Foster. Dr. Langley, the editor of the *Journal of Physiology*, has been, during the absence of Sir Michael Foster, deputy professor of physiology.

Muenchener Klinikerschaft.—The medical students at Munich have organized a society with this euphonious title. Professor G. Klein was invited to address the first meeting, and spoke on "Physician and Client." The professors and students of Brussels have organized a somewhat similar society and inaugurated an innovation, the "medical day." The meetings of the society are held on the second Saturday in the month, and on that day all the clinics and hospitals are thrown open to the members, the visitors being personally conducted by the professors or chefs de service to the specially interesting cases. It is hoped that out-of-town physicians will also join the society and come up for these medical days as a kind of post-graduate instruction.

Plague Prophylaxis in India Abandoned.—It is reported that England has abandoned the endeavor to stop the ravages of the plague in India by the use of prophylactic injections of serum. Although over two million people have died from the disease in the last few years and commerce has greatly suffered, the authorities have decided that the resistance and ignorant discontent of the natives are too much for them. After trying isolation, segregation and inoculation, the government finds that it is only undermining its power in the country. It would seem that England was as capable of giving a thorough test to the matter as any government, and the results are therefore of practical interest to the United States, as well as other nations which have oriental colonies.

LONDON LETTER.

Increase of Lunacy in Ireland.

From time to time statistics have been published in THE JOURNAL showing an increase of lunacy in Great Britain. But certain Irish figures recently published are still more alarming. At a conference of the Irish District Asylum Committee in Dublin Dr. O'Neill read a paper showing that, notwithstanding a yearly decreasing population, insanity was rapidly on the increase. In 1880 the number of persons under treatment was 250 per 100,000 of the population, whereas in 1902 the figures reached the appalling total of 499, an increase of 100 per cent. Emigration and agricultural depression are undoubtedly special reasons for the increase of insanity. The country had been drained of its manhood, and there is a tendency to the depreciation both of the physical and mental condition of the old people remaining. Importance must also be attributed to the agricultural depression that followed in the track of emigration, the inability to make ends meet, the want of nutritious food, and the necessarily accompanying worry wearing the people down. The excessive use of alcohol is another cause. Of the 34,349 admissions during the last 10 years intemperance was the assigned cause in 3,098 cases. Dietary is another matter of importance. Formerly the staple food of the country was porridge, milk, potatoes and butter, which was wholesome, sustaining and nutritious. Tea drinking in excess was given as an indirect factor in inducing insanity.

Diploma in Tropical Medicine Inaugurated at the University of Cambridge.

The great progress in tropical medicine in this country, shown by the establishment of two schools, one at Liverpool the other at London, the numerous expeditions despatched to the tropics, and the remarkable discoveries made by them are fittingly crowned by the establishment of a "Diploma in Tropical Medicine" at the University of Cambridge. The ordinary medical curriculum is no longer regarded as by itself sufficient to fit graduates in medicine for the special conditions attending practice in the tropics. The special board of medicine propose (1) that an examination in tropical medicine and hygiene be held once a year, or more than once if thought expedient; (2) any person whose name is on the medical register to be admitted a candidate under such conditions as the State Medicine Syndicate may prescribe, provided that a period not less than 12 months shall have elapsed between the attainment by the candidate of a registrable qualification and his admission to the examination; (3) the subjects of examination to be nature, incidence, prevention, and treatment of epidemic and other diseases prevalent in tropical countries, and (4) that a candidate who passes the examination be entitled to a diploma testifying to his competent knowledge of tropical medicine and hygiene. 1. Candidates shall present evidence, approved by the syndicate, that they have diligently attended, at home or abroad (a) a course of laboratory instruction in pathology, including parasitology and bacteriology in relation to tropical disease; (b) a course of clinical instruction at a hospital in which cases of tropical diseases are received; (c) a course of instruction in hygiene and in methods of sanitation applicable to tropical climates. 2. Candidates may present dissertations, memoirs, or other records of work carried out by themselves on subjects connected with the nature, incidence, prevention or treatment of tropical diseases, and such records will be taken into account by the examiners in determining the result of the examination.

Correspondence.

"How to Write a Medical Article—A Plea for Plagiarism."

SAVANNAH, GA., Dec. 2, 1903.

Dr. G. Frank Lydston, Chicago:

My Dear Doctor:—On Saturday last a friend informed me of a communication from you in the *Atlanta Journal* pertaining myself; I tried to secure a copy without avail; and was about to write you yesterday when another gentleman apprised me of another communication from you in this week's issue of THE JOURNAL of the A. M. Ass'n which I had not seen and which I have not yet had an opportunity of reading but was informed of the nature of your communication which was quite an unexpected supprise to me. And without a full explanation from me of the matter, I can appreciate your position.

For several years I have been editing a medical journal, as well as doing a large practice, and have been compelled to rely largely on my stenographer for clerical office details, as well as my proof reading, which I trusted to her care for correction; prior to this incident she has made very few errors or omissions; in fact, she has been painstakingly careful and correct in the work assigned, until I trusted implicitly.

In the preparation of my paper for the Georgia State Medical Association I found that my views and your own on the subject were so near alike that I decided to use a few paragraphs which I "blue penciled" and instructed my stenographer to use and give you due credit for same, noting page and title of your book. I also instructed her to make a carbon copy at the same time and send it to the *Annals of Gynecology and Pediatry*, Boston, which she did, and forwarded same before I had the opportunity of seeing it. I found out at the last moment I could not attend the meeting of the state association and handed my paper over to a friend that night (April 14, 1903).

Complications of a political nature demanded my presence at the meeting on the last day, and in company with several physicians I arrived at the meeting on the last day when the program of the association was nearing its end. My paper was read by title without my ever having read it over. In this way my stenographer's error escaped my notice. The galley proofs from the *Boston Journal* and from the transactions were gone over by the stenographer, and again the oversight was not detected.

Preparatory to moving, on October 1, my library and journals were packed in boxes the middle of September, and in this way the volume of the transactions, together with the *Boston Journal* and reprints were packed away for about five weeks awaiting the arrival of new book cases which were delayed in transit. In this way I had not had an opportunity to see the transactions or to look over the journal.

I first discovered the error last week, when my friend mentioned to me your communication in the *Atlanta Journal;* then I examined the copy of the transactions and hunted up the journal, and was horrified beyond description to find that you had not been given proper credit for paragraphs used. And, as stated before, I was about to write you when another friend apprised me of your communication in THE JOURNAL of the American Medical Association. I now hasten to make apologies for my seeming plagiarism.

I beg to offer herewith deposition from my stenographer covering this unfortunate occurrence, with my most profound regrets, and beg of you to accept my sincere apologies for my seeming imposition on you; and respectfully request you to make such retraction from your recent communication in THE JOURNAL of the American Medical Association, as your gentlemanly conscience may direct you, and to publish the same in next week's issue of THE JOURNAL of the American Medical Association.

Believing that a gentleman's honor, after proper explanations and apologies have been made, will not suffer at your hands, and thanking you in advance, permit me to remain,

Yours very fraternally,

W. E. FITCH, M.D.

[Accompanying the above letter was a deposition made by Dr. Fitch's stenographer corroborating the above and assuming all responsibility for the article.]

CHICAGO, Dec. 4, 1903.

Dr. W. E. Fitch:

Dear Sir:—I shall take great pleasure in publishing your letter and the attached affidavit. I will state that my critique was based, not only on the article in the *Annals of Pediatry and Gynecology,* but on a reprint *received from you* by one of my friends. I would suggest in passing that it is hardly fair to the profession for one to publish as original articles copied verbatim from text-books by an amanuensis. I would further remark that, in justice to yourself, you ought at least to look over the proofs of your articles or read them after they are printed and before sending out your reprints. I assure you, my dear sir, I do not feel that the matter under con-

sideration was so much a grievance to myself as a violation of a principle in which we are all interested. There is nothing in my critique which calls for correction or apology. The facts alleged are admitted by you, and nothing is now required further than the publication of your explanation of how it all happened. Very truly yours,

G. F. LYDSTON.

Good Men in Bad Company—An Explanation which Explains.

NEW YORK CITY, Dec. 3, 1903.

To the Editor:—My attention has been called to an advertising circular of the *Medical Brief* in which my name appears as a contributor. Will you kindly permit me to state through the columns of your widely-circulated journal that this article on "Fracture of the Radius" was not written for the *Medical Brief*. Some months ago a woman stenographer called at my office and represented that she was in great financial distress and asked me to dictate to her some short article for which she said she would be able to obtain $20 which was greatly needed at that time to prevent her from being turned out of her home by her landlord. She promised that the article should be offered to the *New York Medical Journal* or to the *Medical Record*, and if not accepted by them she would return it to me. Since that time I have not seen her or the article, nor did I know what had become of it until I saw it advertised as a contribution to the *Medical Brief*. I learn that she has imposed on the generosity of other members of the profession here in this city in like manner. JOHN A. WYETH.

[Does this explain why certain other reputable men appear as contributors to the above so-called medical journal, in some instances with photograph?—ED.]

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

A CRANIOTOMY, WAS IT JUSTIFIABLE?

———, WEST VIRGINIA, Nov. 27, 1903.

To the Editor:—I desire to report a case which was more than interesting to me, having practiced medicine less than three years, and one which required more than ordinary thought.

At 6 p. m., on November 4, I was called to Mrs. H., who had been in labor three or four hours, and made an examination, which revealed R. O. A. position, half-dollar dilatation, but no waters. The pains were sharp, cutting and irregular, pulse 82, temperature normal. After an hour the pains became more frequent and sharp, with no tendency to bearing down. She being a primipara, I suggested that she use all effort to expel contents and not cry aloud, gave 20 grains chloral and waited until 10:30, when I again examined and found dollar-size dilatation or more, but pains were yet sharp and cutting with only three or four minutes' interval—no waters yet formed. At 2 a. m. examination was again made and the membranes ruptured with less than a pint of water escaping. The pains soon became more severe and cutting, of a continuous character and very high up; after slight massage full dilatation was secured, but the head would not engage. It was then I had Dr X called in, who examined the patient and agreed with the above findings. Chloroform was at once administered and a high application of the forceps tried, but found to be impossible by either of us, even with external pressure from above. Another physician was called by the husband and he repeated the trial of high application, but failed. I then tried to do a podalic, but could never reach a foot, as did Drs. X and Y, who were also unable to accomplish anything. The woman was then growing cyanotic, with some hemorrhage going on all the time, so I decided to do a craniotomy, which was accomplished in a very few minutes at 5 a. m. The child was of medium size, weighing 8¾ pounds, and nothing out of the ordinary was discernible. The woman made an uneventful recovery and is now sitting up. Catheterization was necessary for two days after delivery.

Did the case justify operation? Being a young man in the field of medicine, I feel that older physicians should not hesitate to comment.

ANSWER.—We gladly publish the above report of a case, as requested; but omit name of reporter and place. As the reporter asks for comments we gladly give them.

The case well illustrates a mistake—we hope an uncommon one—of premature and unnecessary operative interference. While the average duration of labor in primiparæ is from 16 to 20 hours, a labor lasting 36 to 48 hours is not rare, and calls for no interference unless there is danger to the mother or to the child. So far as the report shows there was nothing abnormal in the labor up to 2 a. m., when the membranes were artificially ruptured. It was a mistake to urge the patient to bear down for the exercise of the voluntary muscles has little effect in dilating the uterus and needlessly wears out the patient. It would have been well to give the patient some relief from her suffering by administering some analgesic. The chloral was all right, but the dose was too small. Morphin would have been much more efficient. A hypodermic injection of ¼ grain would probably have given her some sleep and much relief. Although our correspondent does not describe the condition of the cervix when the membranes were ruptured, it is evident that dilatation was not completed, and the bleeding which occurred later during the manipulations was probably from tears in the cervix caused by the forceps or the efforts to turn. The artificial rupture was not indicated and was harmful. The application of the forceps to the head above the brim of the pelvis is always difficult and likely to be dangerous to both mother and child. It should never be attempted unless there is urgent indication. No indication was proved to exist in this case. Unless there was a contracted pelvis the head would probably have molded and descended in the course of a few hours. Finally, after the efforts to extract and turn had been in vain craniotomy was justifiable if the child was dead. Nothing is said on this point. We do not know that any effort was made to find the fetal heart beats. In case of failure to hear the fetal heart the death of the child should be determined by introducing the hand into the uterus and finding whether the cord beats or not. This case shows the importance of knowing the mechanism, progress and prognosis of spontaneous labor in its various manifestations in different individuals, and the danger of premature interference. It shows the importance of adhering strictly to the indications for interference, namely, danger to mother and child. It suggests the rule that when in doubt it is safer to rely on Nature than on interference.—ED.

HEISTER'S SURGERY.

FLAGSTAFF, ARIZ., Dec. 1, 1903.

To the Editor:—I have procured a copy of Heister's Surgery—English edition—a very novel old book, indeed, but, unfortunately, the title leaf is missing and I can not determine the year of publication. I am anxious to know in what year this book was printed and take the liberty of asking your assistance. The author was an operating surgeon as early as 1708. The text refers to events as late as 1736. The German edition must have been written after this. W. P. SIPE.

ANSWER.—The first English edition of this work was published by W. Innys, London, in 1743, from the Latin edition (2 vols., Venice, 1740). The fifth English edition appeared in 1753. All the English editions contained the two volumes in one; the first five editions were each composed of an introduction of XVI pages and two parts, of 476 and 338 pp. respectively, with 38 plates. The sixth and seventh editions were translated from Heister's later editions and appeared in 1757 and 1763; the sixth edition containing XVI, 456 and 404 pp. and 40 plates; the seventh (J. Clarke, London) XVI, 456 and 414 pp.

ANALYSIS OF MILK.

ST. LOUIS, Dec. 2, 1903.

To the Editor:—Will you give the name of some good book on the quantitative analysis of cow's milk and of condensed milk?

LEO C. HUELSMANN.

ANSWER.—Any one of the following we believe will be satisfactory: Outlines of Dairy Bacteriology, by H. L. Russell. Cloth, $1.00. Analysis of Milk and Milk Products, by H. Leffman. Cloth, $1.25. Air, Water and Food, by Richards and Woodman. Cloth, $2.00. These books can be obtained of W. T. Keener & Co., Chicago; L. S. Mathews & Co., St. Louis; or any bookseller will order them.

TOOTH EXTRACTION IN PRESENCE OF ALVEOLAR ABSCESS WITH FISTULA.

———, WEST VIRGINIA, Dec. 2, 1903.

To the Editor:—1. Why is extraction of a tooth contraindicated when there is an alveolar abscess with fistula present? 2. When, in a case of this kind, could the tooth be extracted safely?

ANSWER.—1. It is not contraindicated. 2. A tooth of this kind may be extracted safely at any time.

Marriages.

THOMAS W. SHAW, M.D., Worcester, Mass., to Miss Diamond of Hartford, Conn.

WILLIAM KERR, M.D., to Miss Lula Dodd, both of Randolph, Iowa, November 18.

CHARLES D. RICKER, M.D., to Miss Lucretia B. Donavin at Baltimore, November 23.

DORSEY W. FELLERS, M.D., to Miss Grace Lecrone, both of Tiffin, Ohio, November 27.

HUGH TUDOR HALL, M.D., to Miss Anna Libbey Aldrich, both of Aiken, S. C., November 26.

GEORGE W. HEMMETER, M.D., to Miss Mae Elsie Thiemeyer, both of Baltimore, November 25.

JOHN HERMAN THESING, M.D., to Miss Catherine Wulftange, both of Cincinnati, November 18.

MCVEY BEATTY, M.D., Butler, Pa., to Miss Lavinia Virginia Blake, at Baltimore, November 26.

THOMAS B. MORRISSEY, M.D., to Miss Mary G. Hannegan, both of Portland, Me., November 11.

OTIS J. BALDWIN, M.D., Farmersville, Ill., to Miss Edith Austin of Virden, Ill., November 26.

CHARLES B. YOUNGER, M.D., Chicago, to Miss Nannie Ruth Broaddus of Lacon, Ill., November 25.

ROBERT MCDONALD SHANNON, M.D., to Miss Marie Gabriel Horton, both of Piqua, Ohio, November 26.

THOMAS H. RUCKER, M.D., Arlington, Ind., to Mrs. Josephine Lightner of New Albany, Ind., November 25.

CALEB D. THOMAS, M.D., Philadelphia, to Miss Mary E. Klotz of Lansford, Pa., in New York City, November 24.

WILLIAM L. VAN ORMER, M.D., Schellsburg, Pa., to Miss Sarah Bramwell Shafer, at Frostburg, Md., November 26.

JOHN W. WELLS, M.D., Taylorsville, Ky., to Mrs. Claudia Roby Bealer of Bardstown, Ky., at Louisville, November 25.

Deaths.

William Shaw Stewart, M.D. Jefferson Medical College, Philadelphia, 1863, assistant surgeon in the Federal Army during the Civil War; one of the founders of the Medico-Chirurgical College, for ten years its dean; and successively professor of obstetrics and clinical gynecology, and was professor emeritus at that institution; one of the founders of the American Academy of Medicine; for nine years director of public schools of Philadelphia; a member of the American Medical Association, Medical Society of the State of Pennsylvania, Philadelphia County Medical Society, and the Obstetrical Society of Philadelphia, died suddenly at his home in Philadelphia, November 25, from heart disease, aged 65.

Anthony F. Conroy, M.D. Jenner Medical College, Chicago, 1897, formerly of Chicago, died at the City Hospital, St. Paul, Minn., November 28, from tuberculosis contracted while a prisoner of the British at Pretoria, during the Boer War, aged 38. He was chief surgeon of the Red Cross corps of 150 surgeons and hospital attendants who went to South Africa with the avowed intent of caring for the Boer sick and wounded, but whose motives were impugned by the English.

Henry William Kendall, M.D. Medical College of Ohio, Cincinnati, 1853, one of the oldest physicians of Western Illinois; a member of the American Medical Association and Illinois State Medical Society; major-surgeon of the Fifteenth Illinois Volunteer Infantry and later chief surgeon second division, Sixteenth Army Corps in the Civil War, died at his home in Quincy, November 25, from peritonitis, after an illness of five days, aged 72.

William Millet Huntington, M.D. New York University, 1845, a member of the Vermont Medical Society, and first president of the White River Medical Society, who had practiced in Rochester, Vt., for more than 55 years, died at his home in that city, November 19, aged 84. He served during the Civil War as acting assistant surgeon in the Army, and represented his town in the General Assembly in 1863 and 1864.

Charles A. Dunham, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1880, in charge of the relief work following the fire which devastated Jacksonville, Fla., in 1901; major and surgeon Florida State Troops; surgeon of the First Florida Infantry, U. S. V., in the Spanish-American War, died suddenly from heart disease at his home in Jacksonville, November 22, aged 49.

Charles H. Porter, M.D. Albany (N. Y.) Medical College, 1861, assistant surgeon Sixth New York Volunteer Heavy Artillery throughout the Civil War, formerly a well-known physician of Albany, and for many years treasurer of the New York State Medical Society, died at Canandaigua, N. Y., November 21, after an illness of several years, aged 69.

William H. Jackson, M.D. University of South Carolina, Columbia, 1873, a member of the Erie County Medical Society, New York State Medical Association, American Medical Association, and New York and national associations of railway surgeons, died at his home in Springville, N. Y., from pneumonia, November 28, aged 62.

James R. McIlvain, M.D. Kansas City Medical College, 1882, a member of the American Medical Association, the first physician to locate in Oklahoma, and one of the best-known members of the fraternity in that territory, died at his home in Oklahoma City, November 26, after an illness of three weeks from heart disease, aged 50.

Charles J. Hagan, M.D. Starling Medical College, Columbus, 1864, who while still an undergraduate served as assistant surgeon in the Civil War, and after graduation as assistant surgeon in the Forty-sixth Ohio Volunteer Infantry, died at his home in Keokuk, Iowa, November 30, from dropsy, aged 61.

James A. Lane, M.D. Jefferson Medical College, Philadelphia, 1881, one of the early instructors in the Kansas City Medical College and once president of the Kansas State Medical Society, died at his rooms in Leavenworth, Kan., from tuberculosis, November 27, after an illness of more than a year, aged 50.

Cyrus Edson, M.D. College of Physicians and Surgeons, New York, 1881, for many years an efficient officer of the New York Board of Health, and ultimately health commissioner of the city, died at Roosevelt Hospital, New York, from pneumonia, December 2, after an illness of five days, aged 46.

Valentine S. Benson, M.D. Kentucky School of Medicine, Louisville, 1870, a member of the State Board of Equalization and for four years superintendent of the Illinois Hospital for the Criminal Insane, Chester, died at his home in McLeansboro, Ill., from heart disease, November 27, aged 69.

William J. Dupree, M.D. Vanderbilt University, Nashville, Tenn., 1876, of Westmoreland, Ala., a member of the American Medical Association, was found wandering a long distance from his home, November 26, was taken home, and died the same day without regaining consciousness, aged 48.

Clarence W. Lehman, M.D. Medical College of Ohio, Cincinnati, 1890, of Eaton, Ohio, a member of the American Medical Association and the Ohio State Medical Society, local surgeon for the Pennsylvania Railway, was killed in a collision of trolley cars, near Eaton, December 3.

Albert Blumberg, M.D. University of Würzburg, Germany, 1871, a member of the American Medical Association, a prominent physician of Pittsburg, Pa., was struck and instantly killed by a train at Braddock, Pa., where he had gone in consultation, December 1, aged 55.

Charles S. Boyce, M.D. Jefferson Medical College, Philadelphia, 1877, who was under sentence of imprisonment at Auburn Prison for criminal assault, but had been released on bail a few days before, died suddenly at his home in Salamanca, N. Y., November 19, from paralysis.

Joseph M. Harcourt, M.D. New York University, 1874, a graduate of Trinity College, Dublin, noted as a linguist, a mathematician and an orator, one of the most scholarly physicians of Brooklyn, died at his residence, November 30, after a lingering illness, aged 80.

Daniel James Neylan, M.D. New York University, 1886, at one time assistant surgeon in the Rhode Island Militia; a member of the American Electro-Therapeutic Association, died suddenly at his home in Bristol, R. I., November 26, from heart disease, aged 51.

William H. Holmes, M.D. College of Physicians and Surgeons, New York, 1857, assistant surgeon in the Navy during the Civil War, died at his home in Orange, N. J., November 30, from Bright's disease, after an illness of a year, aged 69.

Addison I. Cammack, M.D. New Orleans School of Medicine, 1866, a leading physician of Waco, Texas, and for many years a member of the local board of health, died at his home in that city, November 25, from rupture of an artery, aged 65.

John Fee, M.D. New York University, 1865, for 9 years city physician of Kansas City, Mo., for several years a surgeon in the Army, died suddenly at his home in Kansas City, from pulmonary edema, November 30, aged 67.

George B. Acker, Jr., M.D. Western Pennsylvania Medical College, Pittsburg, 1897, of Lawrenceville, Pa., died at the home of his parents in Pittsburg, December 1, from pneumonia, after an illness of four days, aged 35.

John McKinnon, M.D., professor of diseases of the kidneys and clinical medicine in the Bennett College of Eclectic Medi-

cine and Surgery, Chicago, died at his home from fatty degeneration of the heart, November 30.

Thomas **Fitzhugh Grayson, M.D.** University of Pennsylvania, Philadelphia, 1866, the pioneer practitioner of Fort Dodge, Iowa, died at his home in that city, November 22, from gastric trouble of long standing, aged 65.

James **R. Adams, M.D.** Medical College of Ohio, Cincinnati, 1852, surgeon of the Forty-eighth Indiana Volunteer Infantry during the Civil War, died at his home in Petersburg, Ind., November 29, aged 83.

Nathan **H. Brown, M.D.** Bennett College of Eclectic Medicine and Surgery, Chicago, 1875, was stricken by apoplexy at his home in Fremont, Neb., November 28, died early the next morning, aged 51.

Henry **H. W. Crittenden, M.D.** Washington University School of Medicine, Baltimore, 1867, died at his home in Crewe, Va., November 30, from paralysis, after an illness of two weeks, aged 59.

Thomas **Richardson Storer, M.D.** Jefferson Medical College, Philadelphia, died at his home on Scenery Hill, near Washington, Pa., November 25, after an illness of two months, aged 61.

Wallace **O. Buckland, M.D.** St. Louis Eclectic Medical College, 1881, died at his home in Oakland, Cal., from postoperative pneumonia, November 28, after an illness of one week, aged 65.

George **P. Campbell, M.D.** Bellevue Hospital Medical College, New York, 1870, died suddenly at the foot of his office stairs in Wauseon, Ohio, from apoplexy, November 25, aged 55.

Frank **R. Payne, M.D.** Western Reserve University, Cleveland, 1889, died at his home in Cleveland, from pneumonia, November 23, after an illness of eight days, aged 37.

James **R. Cromer, M.D.** Eclectic Medical Institute, Cincinnati, 1874, a retired physician of Flora, Ind., died at his home in that place, December 2, from pneumonia, aged 65.

William **G. Saunders, M.D.,** city physician of Grand Rapids, Mich., about thirty years, ago, died at Butterworth Hospital in that city, November 26, from apoplexy, aged 76.

Michael **Heinimann, M.D.,** a "Forty-niner," who practiced medicine in San Francisco for more than half a century, died at his home in Oakland, November 26, aged 85.

Albert **G. Beebe, M.D.** Hahnemann Medical College, Chicago, 1869, died at his home in Chicago, December 2, from heart disease, after an illness of four days, aged 60.

J. Franklin **Merkle, M.D.** University of Pennsylvania, Philadelphia, 1894, died at his home in Perkasie, Pa., November 26, after an illness of several weeks, aged 42.

Welford **S. Fisher, M.D.** University of Michigan, Ann Arbor, 1903, an interne at the University Hospital, died in that institution, November 30, from typhoid fever.

Thomas **S. Freeman, M.D.,** for more than thirty years a practitioner of Sherman, Texas, died suddenly from heart disease at his home, November 23, aged 76.

Gracia **Leah Morehead, M.D.** Woman's Medical College, Kansas City, Mo., 1901, died from heart disease at her home in Milwaukee, Wis., December 2, aged 25.

Francis **Asbury Pinckard, M.D.** University of Maryland, died from paralysis at his home in Pinckardsville, Va., November 30, after an illness of three days, aged 59.

Thomas **H. Armstrong, M.D.** Starling Medical College, Columbus, 1855, of Woodsfield, Ohio, died at the home of his son in Bellaire, Ohio, November 18.

Andrew **J. Comstock, Jr., M.D.** Jefferson Medical College, Philadelphia, 1884, died at his home in Ventura, Cal., November 21, after a long illness.

Douglas **P. Beatty, M.D.** New York University, 1857, formerly of Hull, Ala., was found dead at his home near Kennesaw, Ga., November 26.

David **S. Oliphant, M.D.** Homeopathic Medical College of Missouri, St. Louis, 1861, died at his home in Toronto, Ont., November 13, aged 87.

Hugh **C. Murphy, M.D.,** died at his home in Kansas City, Mo., November 25, from Bright's disease, after an illness of three weeks, aged 60.

Benjamin **N. Ogden, M.D.** University of Louisville, 1886, of Oak Hill, W. Va., was found dead in bed at Charleston, W. Va., November 27.

Joshua **Warner, M.D.,** the pioneer physician of Westburg Township, Que., died at his home in East Angus, November 22, aged 80.

Overton Carr Todd, M.D. St. Louis Medical College, 1874, died at his home in Powell, Texas, November 27, from neuralgia of the heart.

Silas W. Kellar, M.D. Western Reserve University, Cleveland, 1885, died at his home in New Kensington, Pa., November 27, aged 45.

Fred Welch, M.D. Dartmouth Medical College, Hanover, N. H., 1894, of Centre Strafford, N. H., died in Montrose, Colo., November 16.

Joseph M. Loop, M.D. University of Michigan, Ann Arbor, 1855, died at his home in Port Sanilac, Mich., recently, aged 93.

Joseph H. Maynard-Bellerose, M.D. University of Vermont, Burlington, died at his home in that city, November 25, aged 39.

D. D. Robertson, M.D. University of Louisville, 1867, died at his home in Calhoun, Ky., November 16, from hepatitis, aged 67.

J. M. Burt, M.D., for ten years coroner of Clarke County, Wash., died at his home in Vancouver, November 11, aged 72.

Andrew J. Salts, M.D., health officer of Corning, Iowa, for several years, died at his home in that city, November 23.

Ralph L. Graves, M.D., a veteran of the Mexican War, died at his home in San Antonio, Texas, November 29, aged 85.

H. L. Stewart, M.D., 1878, died at his home in Humboldt, Ill., November 24, after a long illness, aged 80.

Thomas Hillery Taylor, M.D., of Marshall, Texas, died in that place, November 20, aged 77.

J. Frank Carder, M.D., died at Salem, W. Va., December 1, aged 81.

Deaths Abroad.

Dr. F. Brun, professor agrégé at Paris, and one of the eight co-editors of the *Presse Médicale*, died at Paris, November 10, aged 49. He had made a specialty of surgery for children and had been a prolific writer on this and other subjects. One of his latest works was on the malignant tumors of the kidney in children. He devoted himself to ophthalmology at first, and published a valuable text book on "Therapeutique oculaire." He succumbed to the progress of a neurasthenic trouble.

Dr. A. A. Proust, the well-known French authority on international hygiene, died at Paris, November 26, aged 69. He has been inspector general of the French sanitary service since 1884, and has published numerous works on public and private as well as international hygiene, and on other matters connected with the public health.

Book Notice.

A TEXT-BOOK OF THE SCIENCE AND ART OF OBSTETRICS. By Henry J. Garrigues, A.M., M.D., Consulting Obstetric Surgeon to the New York Maternity Hospital. With 504 Illustrations. Cloth. Pp. 844. Price, $5.00. Philadelphia and London: J. P. Lippincott Co. 1902.

This is a companion work to the author's "Text-Book on Gynecology." It is a practical contribution to the literature, and conforms to the high standard of the volume of gynecology. The sections dealing with the development of the ovum, the maternal changes incident to pregnancy, the anatomy of pregnancy, labor and the puerperium are commensurate with the needs of a text-book for the student, and the subjects are adequately stated. The general instructions in the technic of operations, i. e., the treatment of brow, face, occiput posterior, etc., are elucidated after the manner of most books on obstetrics—too much is left to the interpretation of the reader; the steps are insufficiently stated. This is a common fault and can not be held specifically against the work before us. Exception may well be taken to certain statements and directions which are not in consonance with recent opinion. The recommendation that vaginal examinations "should only be repeated with one or two hour interval" does not keep in accord with the necessities of an aseptic conduct of labor; after one thorough *diagnostic* examination in labor little can be learned by vaginal exploration which can not be equally elicited by the deportment of the patient and external palpation. In the delivery of the head the slovenly method of Ritgen-Goodell is recommended—of pulling the face down with the finger in the rectum; other methods of enucleating the head not antagonistic to asepsis would meet indications better. With the same tenacity which governs so many obstetric writers, Dr. Garrigues persists in

associating Credé's method of conducting the third stage with what should be described as a physiologic method; "Credé" distinctly is a procedure for a pathologic third stage. The absence of illustrations and detailed description of Mauriceau's (so-called Smellie-Veit) method neglects the most certain, most powerful, least injurious to the child, and most rational delivery of the after-coming head by manual means—in no respect can the Prague or Smellie methods compare to the former. It is a distinct novelty to see an authority of the present time recommending ferric chlorid solutions in a douche or tampon for hemorrhages in placenta previa and postpartum, as their proven dangers far outweigh their slight temporary advantage. The advocacy of the serre-fine for the repair of perineal laceration can not be too strongly condemned; as far as we know these little instruments have been relegated to the museum as they can not compare in effectiveness with properly inserted sutures. The illustrations are in general accurate and depict the essential points of the book—some are new, most, however, are the approved cuts of other works; certain cuts, as in the chapter on the conduct of normal labor, might well be substituted by more approved drawings.

State Boards of Registration.

COMING EXAMINATIONS.

Missouri State Board of Health, Southern Hotel, St. Louis, Dec. 14-16. Secretary, Dr. W. F. Morrow, Kansas City.

Medical Council, Philadelphia, Dec. 15. Secretary, Dr. Isaac B. Brown, Harrisburg.

Medical Examining Board of Virginia, Lynchburg, Dec. 15-18. Secretary, Dr. R. S. Martin, Stuart.

Colorado State Board of Medical Examiners, 1723 Tremont St., Denver, Dec. 22-24. Secretary, Dr. S. D. Van Meter, Denver.

Utah State Board of Medical Examiners, Salt Lake City, Jan. 4, 1904. Secretary, Dr. R. W. Fisher, Salt Lake City.

State Medical Examining Board of Washington, Tacoma, Jan. 5-6, 1904. Secretary, Dr. P. B. Swearingen, Tacoma.

Board of Medical Examiners of Arizona, Phoenix, Jan. 4-5, 1904. Secretary, Dr. Wm. Duffield, Phoenix.

State Medical Examining Board of North Dakota, Grand Forks, Jan. 5, 1904. Secretary, Dr. H. M. Wheeler, Grand Forks.

Board of Medical Examiners of the State of Oregon, Portland, Jan. 5, 1904. Secretary, Dr. Byron E. Miller, Portland.

Colorado State Board of Medical Examiners, 1723 Tremont St., Denver, Jan. 5-6, 1904. Secretary, Dr. S. D. Van Meter, Denver.

Minnesota State Board of Medical Examiners, State Capitol Bldg., St. Paul, Jan. 5-7, 1904. Secretary, Dr. C. J. Ringnell, Minneapolis.

State Board of Health of Rhode Island, State House, Providence, Jan. 7, 1904. Secretary, Dr. G. T. Swarts, Providence.

Indiana State Board of Medical Registration and Examination, Indianapolis, Jan. 13, 1904. Secretary, Dr. W. T. Gott, Crawfordsville.

Board of Medical Examiners of South Dakota, Cataract Hotel, Sioux Falls, Jan. 13-15, 1904. Secretary, Dr. H. E. McNutt, Aberdeen.

Wisconsin Board of Medical Examiners, Milwaukee, Jan. 12, 1904. Secretary, Dr. F. R. Forsbeck, Milwaukee.

Vermont State Board of Medical Censors, Y. M. C. A. Bldg., Burlington, Jan. 13-14, 1904. Secretary, Dr. S. W. Hammond, Rutland.

Board of Medical Supervisors of the District of Columbia, Washington, Jan. 14, 1904. Secretary, Dr. Wm. C. Woodward, Washington.

Illinois State Board of Health, Great Northern Hotel, Chicago, Jan. 14-16, 1904. Secretary, Dr. J. A. Egan, Springfield.

Iowa State Board of Medical Examiners, Capitol Bldg., Des Moines, Jan. 26-27, 1904. Secretary, Dr. J. F. Kennedy, Des Moines.

Vermont Report.—Dr. W. S. Hammond, secretary of the Vermont State Board Medical Censors (Regular), reports the written examination held at Burlington, July 8-9, 1903, as follows: Number of subjects, 8; questions, 80; percentage, 70; candidates, 23; passed 20; failed, 2. Following are the colleges of the candidates, the years of graduation, the grades attained and the questions asked:

PASSED.

University of Vermont, (1887) 80; (1903) 78, 72, 79, 79, 78, 74, 80, 81, 78, 78,* 80.
Baltimore Medical College, (1903) 76, 71, 70, 79.

Tufts Medical College	(1903)	81
Detroit College of Medicine	(1900)	70
Columbia University, New York	(1903)	79
Bellevue Hospital Medical College	(1894)	70
New York City University	(1903)	77

FAILED.

Baltimore Medical College	(1902)	58
Maryland Medical College	(1903)	58

* This candidate did not take the whole examination; his average is given as 78 for the subjects covered.

PHYSIOLOGY.

1. Give the essential difference between cow's milk and human milk. 2. Describe: (*a*) striated muscle fiber; (*b*) unstriated muscle fiber; (*c*) give an example of each. 3. Describe the fetal circulation. What changes occur in it after birth? 4. Give the physical characters and composition of normal urine. 5. Trace the products of digestion from the intestinal villi to the blood stream. 6. (*a*) Explain the difference between afferent and efferent nerves. (*b*) What is the function of the column of Goll and what is its situation in the cord? 7. Locate the following brain centers: Leg, arm, face, speech. 8. Give the histology of the liver. 9. Name five digestive fluids and give the reaction of each. 10. Give the functions of the vasomotor nervous system.

CHEMISTRY.

1. Give formula for converting F. theometric reading to C. scale. 2. What is understood by electrolysis? 3. What are radicals as used in chemical formulas? Illustrate. 4. Give briefly the chemistry of I. 5. Why is calomel contraindicated in a case taking a solution of KI? 6. How would you conduct an autopsy and care for removed organs in a case of suspected arsenical poisoning? 7. What are the principal products of petroleum distillation? 8. Name all the causes of a turbid urine freshly passed. 9. Give a test for bile in the urine. 10. What may high and low sp. gr. in urine indicate?

PATHOLOGY.

1. Give pathology and prognosis for internal otitis following scarlatina. 2. Specify the dangers to be feared in deep cuts of the palm of the hand. 3. What conditions would influence you for, and what against, conservation in a deep buzzsaw cut of the wrist? 4. Give the symptoms, ordinary complications and prognosis in backward dislocations of the ulna on the humerus. 5. Describe the symptoms, pathology and prognosis of empyema and differential diagnosis from ordinary serous pleurisy. 6. Give the symptoms of strangulated inguinal hernia. 7. How would you distinguish between suppression, nervous retention, stricture and enlarged prostate in a person unable to urinate? 8. Give description, etiology and pathology of housemaid's knee. 9. Give the symptoms in fracture of the middle of the fibula. 10. Describe a bunion, giving its etiology and pathology.

SURGERY.

1. If a patient with chronic otorrhea and painful swelling behind the ear had a chill, vomiting, headache, slow pulse, trembling, convulsions or paralysis, what would you suspect and what treatment would you advise? 2. If you found a man at night in a mountain camp, nearly exsanguinated by the hemorrhage from a deep cut in the palm of the hand, what would you do if you had no light but a single tallow dip, no instruments but those in your pocket case and no surgical aid within twenty miles? 3. What would you do for a man who had all the flexor tendons, radial and ulnar arteries and both bones of the fore arm cut off close to the wrist by a buzzsaw, there still being circulation enough to keep the hand warm? 4. How would you treat a backward dislocation of the ulna on the humerus? 5. How would you treat an empyema? 6. What would you do for an old reducible inguinal hernia which has become strangulated? 7. What would you do for a man of 75 who was unable to urinate? 8. Give treatment for housemaid's knee. 9. How would you treat a compound fracture of the tibia and fibula? 10. How would you treat a patient crippled by an intractable bunion?

ANATOMY.

1. Briefly describe the internal hearing apparatus. 2. Describe the circulation in the hand. 3. Give the surgical anatomy of the wrist. 4. Give the surgical anatomy of the elbow. 5. Describe the gross anatomy and boundaries of the cavity of the chest. 6. Give the anatomy of oblique inguinal hernia. 7. Give the gross anatomy of the bladder and male urethra. 8. Give the anatomy of the knee joint. 9. Give the surgical anatomy of the leg. 10. Give the surgical anatomy of the great toe.

PRACTICE.

1. What do you understand by the terms: Symptoms, diagnosis, prognosis, period of incubation of diseases? 2. Differentiate between rubeola and rubella. Give treatment of rubeola and name its complications. 3. What are the symptoms, prognosis and sequelæ of cerebral hemorrhage? 4. Describe sonorous sibilant, crepitant and mucous râles. 5. Give the rules for the conduction of an autopsy when poison is suspected. 6. What symptoms may arise from a dislocated kidney? 7. Name the diseases with which gallstone colic may be confounded and give differential diagnosis. 8. Give the varieties of erysipelas, diagnosis and treatment. 9. Name five diseases in which Cheyne-Stokes respiration is commonly found. 10. What are the symptoms, prognosis and treatment of hysteria?

MATERIA MEDICA AND THERAPEUTICS.

1. Define the term narcotic, hypnotic, anesthetic, antispasmodic, with illustrations of each group. 2. Name the principal therapeutic uses of belladonna. 3. What is asafetida, its preparations and therapeutics? 4. Name the principal simple purgatives with their preparations and doses. 5. Give the symptoms and treatment of chloral hydrate poisoning. 6. Name the preparations of bromids and give their therapeutics. 7. What are the uses of veratrum viride? How would you treat a case of veratrum poisoning? 8. Give doses of tincture aconite, opium, gentian, uva ursi, chlorid of iron, gelsemium, guaiac, ipecac and wine of colchicum. 9. Name three diuretics and give their therapeutic use. 10. Write two prescriptions for use in the summer diarrhea of children.

OBSTETRICS.

1. What are the signs of pregnancy and how are they classified? 2. What are the causes, dangers, symptoms and treatment of abor-

tion. 3. What is the vomiting of pregnancy, and how should it be treated. What should be learned at the first examination in a case of labor? 4. How should a case of breech presentation be managed throughout? 6. To what is rigidity of the os due, and what is the treatment? 7. What is the treatment of placenta previa when occurring before full term, and its management at full term? 8. Give cause and treatment of secondary umbilical hemorrhage in the new-born child. 9. Give the causes, symptoms and management as best understood and practiced at present of albuminuria of pregnancy. 10. State the causes, symptoms and treatment of puerperal phlebitis.

Association News.

List of new members for the month of November, 1903:

ALABAMA.

McLester, Jas. S., Birmingham.
Ferrell, J. H., Woodlawn.
Clark, N. G., Ensley.
Watson, B. Walne, New Decatur.
Hill, Robt. S., Montgomery.
Hartung, G., Cullman.
Palmer, R. D., Carson.
Rosamond, W. L., Ensley.
Edwards, J. H., Wylam.
Horton, J. J., New Market.
Gordon, S. A., Collirene.

ARKANSAS.

Ward, O. D., Tucker.
Deaderick, W. H., Marianna.

CALIFORNIA.

Pillsbury, E. S., Los Angeles.
Gunn, Herbert, San Francisco.
Abraham, Henry, San Francisco.

CONNECTICUT.

Seaver, Jay W., New Haven.
Boucher, John B., Hartford.
Loveland, John E., Middletown.

FLORIDA.

Conter, A. E., Lamont.

GEORGIA.

Williams, V. G., Chipley.

ILLINOIS.

Sauer, H. Edward, Chicago.
Derdiger, A. L., Chicago.
Mitchell, T. B., Chicago.
Pratt, Irene R., Chicago.
Davidson, Frank S., Chicago.
Smith, Jos. F., Chicago.
Collins, L. C., Chicago.
Smith, G. R., Bloomington.
Ward, Milan T., Toulon.
Gerzema, Franz, Peoria.
Bowling, J. Wm., Shawneetown.
Shastid, Thos. W., Pittsfield.
Parker, E. S., Vermont.
Brooks, E. W., St. Elmo.
Crane, Wm. W., Sinclair.
Golding, Daniel G., Arrowsmith.
Taft-Grimes, Ellen F., Decatur.
Watkins, Henry T., Olney.
Maloney, L. H., Savanna.
Moore, Samuel, Danville.

INDIANA.

Dorsey, Frank O., Indianapolis.
Zaring, C. T., Greencastle.

IOWA.

Whiteis, Wm. R., Iowa City.
Judkins, Oliver P., Indianola.
Tobey, Samuel D., Oakland.
Casey, J. M., Ft. Madison.
Busby, Chas. D., Brooklyn.

KENTUCKY.

Harthill, Eleanor A., Louisville.
Bushong, Geo. W., Tompkinsville.
Palmore, E. E., Strode.
Calvert, Caleb A., Fountain Run.
Bedford, T. H., Meshack.
Sabel, Stanley O., Bowling Green.
Yates, J. A., Edmonton.
Wagoner, A. L., Scottsville.
Talbott, John G., Burkesville.
Sympson, W. A., Centre Point.
Duncan, R. F., Tompkinsville.
Garnett, R. E., Glasgow.
Taylor, J. M., Glasgow.

MARYLAND.

Talbott, Thos. J., Baltimore.

MASSACHUSETTS.

Foster, H. K., Peabody.
Rose, W. H., Worcester.

MICHIGAN.

McMeekin, R. J., Saginaw.
Watton, Jos. H., Detroit.
Veitch, G. A., Detroit.
Brown, F. W., Grand Rapids.
Graham, F. J., Sumner.
Eddy, J. H., Wakefield.
LeBlanc, P. J. Benoit, Sault Ste. Marie.
Switzer, G. O., Ludington.
Planck, Edgar A., Union.
Raycraft, Geo. E., Petoskey.
Uloth, Milton J., Ortonville.

MINNESOTA.

Hensel, Eugene A., Alexandria.

MISSISSIPPI.

Sylverstein, Robt. E., Tylertown.

MISSOURI.

Johnson, J. H., Kansas City.
Weinsberg, H. A., St. Louis.
Marx, Ella, St. Louis.
Boogher, Frank, St. Louis.
Loeb, Clarence, St. Louis.
Doyle, Wm. J., St. Louis.
Baysinger, S. L., Rolla.

NEBRASKA.

Craft, Wm. T., Gross.
Birkofer, Wm. J., Gothenburg.
Rosewater, Chas., Omaha.
Emery, Alpheus L., Lanham.

NEW HAMPSHIRE.

Davis, W. S., Sanbornville.
Mitchell, Ezra, Lancaster.
Brown, Elmer F., Groveton.
Lance, Arthur J., Portsmouth.
Heffenger, Arthur C., Portsmouth.
Flanders, Louis W., Dover.
Straw, A. G. Manchester.
Burnham, Hosea B., Manchester.
Evans, Frank W., No. Stratford.

NEW JERSEY.

Maghee, Jas. M., West Orange.

NEW MEXICO.

Mills, Wm. P., Las Vegas.
Wittwer, W. F., Los Lunas.

NEW YORK.

Louria, Leon, Brooklyn.
Townsend, F. M., New York City.
Tierney, Myles J., New York City.
Huber, Francis, New York City.
Cabot, Follen, New York City.
McLaren, John D., New York City.
Bryant, Wm. S., New York City.
Milliken, Seth M., New York City.
Spingarn, Louis, New York City.
Heckel, Fred'k C., New York City.
Kelly, Henry T., White Plains.
Gladman, Everett A., Fulton.
Dalmage, F. W., Hermon.
Driesbach, F. R., Dansville.
Bell, Harold W., Morris Heights.

OHIO.

Ladd, Louis W., Cleveland.
Aldrich, Chas. J., Cleveland.
Fritch, Jos. C. E., Cleveland.
Hatcher, Robt. A., Cleveland.
Case, Guy B., Cleveland,
Prather, Wm. F., Dayton.
Savage, T. J., Xenia.
Byington, H. L., Rising Sun.
Fulton, Margaret C., Portsmouth.
Myers, Elmer G., Canton.
Weger, Geo. S., Delphos.
Radcliffe, Geo. C., Peninsula.
Moody, I. A., Junction City.
Helfrich, Edw. D., Galion.
Ray, A. G., Byer.
Donaldson, Orland V., Gore.
Heffron, C. H., Metamora.
Heinlein, John A., Bridgeport.
Henry, Wm. H., Hamden Junction.
Roether, H. R., Perrysburg.
Hall, Hugh L., No. Amherst.
Jones, L. M., Jamestown.
Whisler, Henry, New Antioch.
Harris, W. P., Bellaire.

OKLAHOMA.

Bowling, Jas. A., Alva.

PENNSYLVANIA.

Salade, Louis A., Philadelphia.
Sinclair, John F., Philadelphia.
Longstreth, Morris, Philadelphia.
Robrecht, John J., Philadelphia.
Walsh, Edw. F., Philadelphia.
Barcus, Adolph L., Philadelphia.
Cassaday, Felix F., Philadelphia.
Huston, David T., Philadelphia.
Baker, Frank K., Philadelphia.
Paist, Henry C., Philadelphia.
Baxter, H. B., Philadelphia.
Blackburn, A. E., Philadelphia.
Van Dervoort, C. A., Philadelphia.
Miller, Geo. B., Philadelphia.
Ferguson, Wm. N., Philadelphia.
Hawkes, Edwin G., Philadelphia.
Crawford, Jas. Lea, Philadelphia.
Hetrick, D. J., Harrisburg.
Speed, Alex. Morrow, Pittsburg.
Livingood, Wm. W., Reading.
Ritter, A. T., Loysville.
Shepard, Ernest N., Burlington.
Bennett, F. G., Clearfield.
McKennan, Jas. W., Washington.
Repman, Harry J., Charleroi.
Ballard, Howard S., Hazleton.
Farles, Clarence T., Narberth.
Henninger, C. H., Polk.
Montgomery, Jas. H., Erie.

RHODE ISLAND.

Stewart, Chas. W., Newport.
Barry, Wm. F., Woonsocket.
Bullard, Ernest C., Jamestown.

SOUTH CAROLINA.

Taft, A. R., Charleston.
Stevens, W. G., Rock Hill.

TENNESSEE.

White, Gordon, Nashville.
Greer, Robt. Lee, Norwood.
Dodson, E. F., Harriman.
Long, Edwin A., Johnson City.
McCampbell, H. H., Knoxville.
Copenhaver, M. M., Knoxville.
Menus, Geo. W., Springfield.
Butler, G. D., Pulaski.
Penn, B. S., Fruitland.

TEXAS.

Lawrence, D. H., Galveston.
MacNelly, Chas., Weatherford.
Jones, W. D., Marshall.
Nelson, W. W., Marshall.
Heartsill, Oliver M., Marshall.
Johns, Henry M., Ennis.
McDaniel, Ralph R., Granger.
Buehring, Theodore, Nordheim.

VIRGINIA.

Davis, Eugene, Richmond.
Gale, S. S., Roanoke.

WISCONSIN.

Decker, Clark O., Crandan.
Mayer, Lawrence P., Hudson.
Hambley, Thos. J., Harley.
Brooks, E. H., Appleton.

The Public Service.

Army Changes.

Memorandum of changes of stations and duties of medical officers, week ending Dec. 5, 1903:

Shaw, Herbert G., asst.-surgeon, relieved from duty at Fort Miley, Cal., and ordered to Manila, P. I.

Bushnell, Geo. E., surgeon, leave of absence extended for twenty-three days.

Ekwurzel, Geo. M., asst.-surgeon, granted fourteen days' leave of absence.

Marrow, Charles E., asst.-surgeon, granted fifteen days' leave of absence, to take effect on completion for examination for promotion.

Reynolds, F. P., asst.-surgeon, in addition to his present duties at the U. S. General Hospital, Washington Barracks, will report in person to Colonel Charles L. Heizman, asst.-surgeon general, president of the faculty of the Army Medical School at Washington, D. C., for duty as instructor in hospital corps drill and assistant instructor in duties of medical officers and medical department administration.

Ekwurzel, Geo. M., asst.-surgeon, assigned to duty at Fort Banks, Mass., having been relieved from further duty in the Division of the Philippines.

Cox, Walter, asst.-surgeon, relieved from duty at Fort Banks, Mass., and ordered to Fort Reno, O. T.

Farr, Charles W., asst.-surgeon, relieved from duty at Fort Reno, O. T., and ordered to Fort Mason, Cal.

Appel, Aaron H., surgeon, sick leave further extended two months.

Kendall, Wm. P., surgeon, ordered to accompany insane from Presidio of San Francisco to Government Hospital for the Insane, Washington, D. C.

Keller, Wm. L., asst.-surgeon, relieved from further duty in the Division of the Philippines and ordered to Fort Riley, Kan.

Brechemin, Louis, surgeon, leaves Ord Barracks, Cal., en route to take charge of Medical Supply Depot, San Francisco.

Ives, Frank J., surgeon, reports on twenty-one days' leave from San Francisco.

Rockhill, E. P., asst.-surgeon, granted thirty days' leave of absence.

Howard, Dean C., asst.-surgeon, detailed to represent Medical Department of the Army at meeting of the American Roentgen Ray Society, to be held at University of Pennsylvania, Philadelphia, Dec. 9 and 10, 1903.

Burr, Rollin T., contract surgeon, relieved from duty at Cabana Barracks, Havana, Cuba, and is en route to his new station, Fort Rodman, Mass.

Amador, Raoul A., contract surgeon, on one month's leave of absence from Fort Revere, Mass.

Stockard, James K., contract surgeon, granted one month's leave of absence on account of sickness, at the expiration of his ordinary leave.

Navy Changes.

Changes in the medical corps of the U. S. Navy for the week ending Nov. 28, 1903:

Alfred, A. R., surgeon, commissioned surgeon, with rank of lieutenant, from Jan. 4, 1903.

Noyes, E. R., pharmacist, warranted pharmacist from Oct. 20, 1903.

Grunwell, A. G., surgeon, detached from the Naval Hospital, Washington, D. C., and ordered to the *Minneapolis*.

Carpenter, D. N., surgeon, ordered to the Naval Hospital, Navy Yard, Washington, D. C.

Noyes, E. R., pharmacist, ordered to the Naval Museum of Hygiene and Medical School, Washington, D. C.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Dec. 5, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Nov. 21-28, 6 cases.
California: Los Angeles, Nov. 14-21, 1 death.
Illinois: Chicago, Nov. 21-28, 3 cases.
Louisiana: New Orleans, Nov. 21-28, 2 cases imported.
Massachusetts: Nov. 21-28, Haverhill, 1 case; Lowell, 1 case.
Michigan: Detroit, Nov. 21-28, 1 case.
New Hampshire, Manchester, Nov. 21-28, 2 cases.
New Jersey: Camden, Nov. 21-28, 1 case.
Ohio: Nov. 21-28, Cincinnati, 2 cases; Youngstown, 9 cases.
Pennsylvania: Nov. 21-28, Johnstown, 6 cases, 1 death; Philadelphia, 70 cases, 11 deaths; Pittsburg, 25 cases, 7 deaths, imported 2; Reading, Nov. 23-30, 3 cases.
Tennessee: Memphis, Nov. 21-28, 8 cases.

SMALLPOX—FOREIGN.

Ecuador: Guayaquil, Nov. 7-14, 1 death.
Great Britain: Nov. 7-14, London, 16 cases; Newcastle-on-Tyne, 18 cases; Nottingham, 4 cases.
Italy: Catania, Nov. 6-12, 1 death; Palermo, Nov. 7-14, 1 case.
Russia: Moscow, Oct. 31-Nov. 7, 1 case.
Turkey: Smyrna, Nov. 1-8, 16 deaths.

YELLOW FEVER—UNITED STATES.

Texas: Cannel, Nov. 26, 4 cases; Nov. 23-Dec. 1, Laredo, 6 cases, 5 deaths; San Antonio, 5 cases, 5 deaths; Minera, Nov. 28, 2 cases, 1 death.

YELLOW FEVER—FOREIGN.

Mexico: Nov. 8-14, Ciudad Victoria, 9 cases, 7 deaths; Linares, 74 cases, 6 deaths; Merida, 3 cases; Nuevo Laredo, 2 deaths; Menclova, Nov. 17-18, 2 cases, 2 deaths; Reata, Nov. 26, 1 case; Vera Cruz, Nov. 15-28, 14 cases, 9 deaths.

CHOLERA—FOREIGN.

Turkey: Syria, Nov. 7, prevailing.

PLAGUE—UNITED STATES.

California: San Francisco, Nov. 12, 1 case, 1 death.

PLAGUE—FOREIGN.

Egypt: Oct. 24-31, Alexandria, 3 cases, 2 deaths; Summalut District, 2 cases.
India: Bombay, Oct. 26-Nov. 3, 45 deaths; Karachi, Oct. 18-Nov. 1, 28 cases, 25 deaths.
Japan: Yokohama, Oct. 24-31, 1 case, 1 death.
Mauritius: Oct. 19-26, 117 cases, 55 deaths.

Medical Organization.

Indiana.

ELEVENTH COUNCILOR DISTRICT FULLY ORGANIZED.—All the counties constituting the Eleventh Indiana Councilor District have been reorganized, each society has adopted the new constitution and by-laws, and some of them report a large increase in membership. The councilor of the district, Dr. Robert Hessler of Logansport is urging the adoption of a regular program for the meetings, made out for a year in advance, if possible. Such a program stimulates the writer of a paper, and, on the other hand, good papers bring out a good attendance.

Iowa.

HARDIN COUNTY MEDICAL SOCIETY.—This society was organized a few days ago with the following officers: Dr. William P. Burke, Iowa Falls, president; Dr. Walter H. Lewis, Alden, vice-president, and Dr. William E. Whitney, Eldora, secretary.

Minnesota.

CHISAGO-PINE COUNTY MEDICAL SOCIETY.—Dr. W. S. Fullerton, St. Paul, state organizer of the Minnesota State Medical Society, reports the organization of this society on the standard plan, November 17, with the following officers: President, Dr. Horace G. Murdock, Taylor's Falls, Chisago County; vice-president, Dr. A. J. Stowe, Rush City, Chisago County; secretary, Dr. Olof S. Werner, Lindstrom, Chisago County; treasurer, Dr. Christopher A. Anderson, Rush City, Chisago County; delegate, Dr. Carl O. Hertzman, Lindstrom, Chisago County, and censors, Drs. Duke W. Cowan, Sandstone, Pine County; C. E. Lundgren, North Branch, Chisago County, and Edwin A. Riley, Willow River, Pine County.

Nebraska.

RICHARDSON COUNTY MEDICAL SOCIETY.—At the meeting of this society, November 25, in Falls City, Dr. John W. Bullard, Pawnee City, councilor for the third district, addressed the meeting, explaining the advantages of the standard plan of organization and urging its adoption. He was given close attention, and the society will take action on the matter at its next meeting, December 30.

Pennsylvania.

NORTHUMBERLAND COUNTY MEDICAL ASSOCIATION.—On November 27, physicians of the county met at Sunbury and organized a Society with the following officers: President, Dr. William B. Stoner, Sunbury; vice-presidents, Drs. Frederick D. Raker, Shamokin, and Ellis A. Smith, Snydertown; secretary, treasurer and reporter, Dr. Horatio W. Gass, Sunbury, and censors, Drs. John H. Vastine, Shamokin, Sidney Davis, Milton, and J. Kerchner, Georgetown.

South Dakota.

SOUTH DAKOTA (FIFTH DISTRICT) MEDICAL SOCIETY.—In accordance with the standard plan of organization, this society was organized at Madison, November 24, Dr. Arthur J. Doty, Colman, councilor for the Fifth District, was elected president; Dr. Frederick H. Files, Madison, vice-president, and Dr. John M. Duff, Madison, secretary and treasurer. The territory of the society has Madison as a center and extends east to Egan, west to Artesian, and north to Oldham.

Texas.

FALLS COUNTY MEDICAL SOCIETY.—Physicians of Falls County met at Marlin, November 25, and organized a society with an initial membership of 18, and elected the following officers: Dr. James P. Barton, Mooreville, president; Dr. Walter H. Allen, Marlin, vice-president, and Dr. Burr G. Ward, Marlin, secretary.

Society Proceedings.

COMING MEETINGS.

Southern Surgical and Gynecological Association, Atlanta, Ga., Dec. 15-17.
Western Surgical and Gynecological Association, Denver, Dec. 28-29.

NEW YORK ACADEMY OF MEDICINE.

Regular Meeting of the Section on Obstetrics and Gynecology, held Nov. 27, 1903.

L. J. Ladinski, M.D., Chairman.

Toxemia of Pregnancy.

DR. WILLIAM S. STONE, in this paper, said that there was frequently present an increased irritability of the medullary centers, dependent on the presence of toxins in the blood. In reporting his own cases, the speaker said that in one of the cases the vomitus contained bile, blood and epithelial cells from the stomach—in short, corresponded to "black vomit." In another case, in which the urine contained many casts and much albumin, the patient's condition was aggravated by emptying the uterus, and death in coma occurred in forty-eight hours. A complete autopsy was made in this instance, apparently only the second one on record, and it pointed very strongly, as did the clinical course, to acute yellow atrophy of the liver. It was pointed out that eclampsia occurred in one-tenth of the cases without albuminuria, and that the renal lesions varied from those of ordinary nephritis to degenerations like those found in the liver. The latter organ might show chronic congestion or the changes observed in acute yellow atrophy. In all cases the renal lesions appeared to be less severe, and secondary to those of the liver. The kidney was often normal, but a diseased kidney and a normal liver were never observed in these cases. Although slight albuminuria was probably always present, it was chiefly significant when noted in the early months of pregnancy. The presence of blood, casts, leucin, tyrosin and bile in the urine was of great importance. In the treatment, the chief reliance should be on the use of saline solution per rectum, or, in some cases, on hypodermoclysis or saline infusion. The induction of premature labor often served to precipitate the fatal issue, but this measure should be undertaken, if possible, before the onset of black vomit.

DISCUSSION.

DR. CHARLES JEWETT said that a patient was never safe while albuminuria existed. The quantity of urea excreted was, in his opinion, a greatly overrated danger signal, for it not only varied widely within the limits of safety, but fluctuated with the quantity of nitrogenous food ingested, and was normally less in the later months of pregnancy. He

had frequently seen women pass safely through labor, though they were excreting a very small quantity of urea.

DR. S. MARX thought antecedent gastric disorders played an important part in connection with hyperemesis gravidarum. He kept such patients quietly in bed on a fluid diet and gave them tablespoonful doses of bismuth. Experience had taught him to think less and less of albuminuria and more and more of the quantity of urea excreted as an index of danger, although he did not mean to imply by this statement that the urea itself was necessarily the element of danger in the toxemia of pregnancy. He had never seen a case of eclampsia in which the urea was not diminished, although it was true he had seen patients escape eclampsia who were excreting very little urea.

DR. E. B. CRAGIN favored the theory of the hepatic origin, but many pelvic disorders cause nausea and vomiting in the non-pregnant; moreover, if all the early cases of vomiting were the result of toxemia he could not understand why this vomiting should so commonly cease spontaneously later when the products of the fetus tended to increase the toxemia. Four recent cases of toxemia of pregnancy dying in hospital were reported by the pathologist to be suffering from acute yellow atrophy of the liver. The general line of treatment advised in the paper met with his hearty approval, but he would emphasize the need of promptly emptying the uterus, for, although this procedure did seem to hasten the fatal termination in some cases, it was not infrequently followed by immediate improvement in seemingly very severe cases. Albuminuria should always be looked on as a danger signal.

DR. S. W. BANDLER expressed the opinion that the toxins were given off by the placenta. If such marked results can follow changes in the thyroid or other well-known internal secretions, it is reasonable that they may follow increase or diminution of the placenta secretion.

Therapeutics.

[Our readers are invited to send favorite prescriptions—such as have been tried and found useful—for publication in these columns. In each case the name of the sender must accompany the prescription, but the name will be published or omitted, as the sender may prefer.]

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Some of the New Remedies in the Oculist's Practice.

L. Konigstein, in *Annals of Ophthal.*, states that formerly ophthalmic medication consisted mainly in the use of atropin, silver nitrate and mercury. Atropin was most frequently used and was a very much-abused drug. Silver nitrate was also used indiscriminately in all inflammatory conditions of the conjunctiva and likewise increased the sufferings of the patient. Iodin was employed frequently as a substitute for mercury. Among the newer remedies he mentions the following indications for their employment: 1, as anesthetics; 2, as analgesics; 3, as mydriatics for ophthalmoscopic examinations; 4, as cosmetics; 5, as an irritant in paresis of the sympathetic; 6, as an anemic agent. He employs cocain, at present, as a substitute for general narcosis, even using it in enucleation of the eye bulb combined with adrenalin. To produce an analgesic effect deep in the eye bulb, he uses aconin and dionin. In glaucoma he combines eserin with cocain as an analgesic agent.

Adrenalin is another important adjunct to the remedies for its marked anemic effects on the mucous membrane, and consequently of great value in conjunctivitis simplex, phlyctenularis, pterygium, keratitis vascularis superficialis, iritis, scleritis, etc. This preparation is a constrictor and not an astringent, the cells being unaffected by it, consequently it may be used in combination with zinc as an astringent. It may also be combined with calomel and yellow ointment. In probing the tear duct very good results are obtained by combining adrenalin with the cocain. As a cosmetic it is said to enlarge the palpebral fissure more than cocain. Dionin is another preparation used by the author in the treatment of keratitis parenchymatosa in recent cases only. It is of no value in long-standing cases, and is contra-indicated in diseases of the conjunctiva. It shortens the course and stops the pain in iritis. Many authors recommend it in choroiditis, retinal hemorrhages, and vitreous opacities. In cataract operations it facilitates the absorption of the lens residue. The effect of dionin is due to the fact that it produces changes in the epithelium of the capillary vessels and causes an increase in the secretion of the blood-plasma into the connective tissue which increases the nutrition of the cells. The circulation of the lymph in the anterior part of the eye is accelerated, which benefits the posterior part of the eye bulb. Stasis in the lymph channels produces pressure on the nerve ends and in this way the analgesic effects of the drug are produced, which last for a considerable length of time.

Protargol and largin are the newer remedies substituted for silver nitrate. They are preferable to silver nitrate for the following reasons, as observed by some authors:

1. They are excellent disinfectants.
2. They do not possess such irritant and caustic qualities.
3. They do not decompose so easily.
4. They are less harmful.
5. They do not produce argyrosis.

The author's views do not entirely coincide with those given above, claiming, as he does, that they do produce argyrosis and decompose easily. He does not believe that they can replace silver nitrate, but thinks they are very valuable adjuvants to it.

Coblentz states that silver nitrate possesses only limited penetrating power, as it is precipitated by albumin and sodium chlorid and thus does not reach the deeper tissues. The more recent preparations are unaffected by the albumin or sodium chlorid, and hence their penetrating and germicidal power is increased.

He mentions several of the recent preparations, together with their composition. Largin, according to this author, is a paranucleo-proteid with silver, containing 11.1 per cent. of silver. It is soluble in nine parts of water, is non-irritating and has high penetrating power. Protargol contains about 8 per cent. of silver and is soluble in equal parts of water. It penetrates deeply and is not precipitated by the tissues. Argyrol, which is placed in the front rank by some authors in the treatment of eye affections, contains 30 per cent. of the metal. It is readily soluble in hot water.

In the author's opinion these preparations are all less irritating than nitrate of silver and are better borne by the patient. The percentage of silver is of less importance than the special combination in which the silver exists.

Tissol, in *Med. Press and Cir.*, states that of all the mydriatics atropin is the best. Its indications are: phlyctenular keratitis or impetigo of the cornea, herpes of the cornea, and interstitial keratitis. The atropin relieves the pain and by dilating the pupil prevents the formation of synechia. Mydriatics are especially of benefit in affections of the iris. Sometimes the eye is too sensitive to the ordinary solution, which is:

℞.	Atropinæ	gr. i	06
	Aq. destil.	ʒiiss	10

In such cases the following solution in warm compresses on the eye serves the purpose:

℞.	Atropinæ	gr. vi	40
	Aquæ	ʒi	30

M. Sig.: One teaspoonful in a bowl of water and applied to the eye on compresses.

Or the following combination may be used in its stead:

℞.	Ext. belladonnæ		
	Ext. hyoscyami, āā	ʒss	2
	Aquæ	ʒx	300

M. Sig.: Apply locally on compresses.

As mydriatics raise ocular tension they are absolutely contra-indicated in glaucoma. Myotics are proper in such conditions, producing myosis, lowering tension and decreasing the

conjunctival secretion. Pilocarpin and eserin are included in this class. Pilocarpin is a less painful and more untrustworthy remedy.

The following formula is recommended by Darier:

℞.	Pilocarpinæ hydrochlor.	gr. i	06
	Eserinæ sulph.	gr. ss	03
	Ext. suprarenalis aqueous		
	Aquæ destil, āā	℥iss	45

M. Sig.: As a myotic in glaucoma.

Methylene Blue in Diarrhea.

Combemale, according to an abstract in *Med. Press and Cir.*, strongly recommends the administration of three grains daily of methylene blue in the treatment of diarrhea from any cause. He has employed this agent with success in the diarrhea of tuberculosis, Addison's disease, and typhoid fever, and in the diarrheas of other acute infections. He gave it in doses of one grain three times a day, or it may be given oftener in smaller doses.

Diarrhea in Typhoid Fever.

L. F. McDowell, in *Dublin Jour. of Med. Science*, recommends the following combinations in the treatment of diarrhea in typhoid fever:

℞.	Tinct. opii camph.	℥ss	2
	Acidi sulph. arom.	gtt. xv	1
	Spts. chloroformi	gtt. x	65
	Aquae	℥ss	15

M. Sig.: To be taken at one dose and repeated as indicated; or:

℞.	Bismuthi carb.	gr. x	65
	Sodii bicarb.	gr. v	30
	Cretæ prep. arom.	gr. xx	1 30
	Tinct. opii	gtt. v	30
	Spts. chloroformi	gtt. x	65
	Sodii salicylatis		
	Pulv. tragacanthæ, āā	gr. x	65
	Aquæ q s. ad	℥i	30

M. Sig.: At one dose.

Epilepsy.

W. Alessi, according to an abstract in *Amer. Med.*, recommends the following combination as of great value in the treatment of epilepsy:

℞.	Sodii arsenatis	gr. 1/64	001
	Zinci phosphidi	gr. 1/14	005
	Calcii phos.	gr. i	06
	Sodii benzoatis		
	Pancreatin, āā	gr. iii	20

M. Sig.: At one dose three times a day before each meal.

According to the author, the arsenic and zinc preparations are nerve tonics, the latter being also a nerve sedative, the former aiding the exhalation of nitrogen. The calcium phosphate reduces cerebral excitability. The pancreatin and sodium benzoate aid digestion and overcome intestinal fermentation.

Chronic Pharyngitis.

The following combinations are recommended by *Jour. des Pract.* in the treatment of pharyngitis:

℞.	Sodii boratis	℥ii	8
	Tinct. myrrhæ	℥i	4
	Infusi cocæ fol.	℥viii	240

M. Sig.: Use as a gargle every two hours; or:

℞.	Potass. chloratis	℥iiss	10
	Infusi rubi fol.	℥iv	120
	Infusi cochleariæ	℥ss	15

M. Sig.: To be used as a gargle.

To Kill Bedbugs.

In response to an inquiry by a subscriber in our last issue as to the best method of killing bedbugs, Dr. W. A. Kriesel of Milbank, S. D., recommends the use of formalin as being more efficient than the bichlorid solution. The room should be at a temperature of 70 F. or warmer in order to promote more rapid evaporation of the solution, thereby affecting the bugs that may have escaped the fluid. The fluid should be introduced into all the cracks and crevices by means of an ordinary oil can. The application should be repeated after five or six days in order to kill any young bugs hatched from eggs not devitalized by the first treatment. The hands must be protected by gloves in order to avoid any escharotic effects. Dr. Kriesel has used this for three years and has never seen it fail.

Dr. J. W. Croskey, Philadelphia, recommends, as a practical and sure remedy for bedbugs, a solution composed of equal parts of spirits of turpentine and aqua ammoniæ applied in the same manner as the foregoing formalin solution.

Burns.

The following is recommended by *Nord Medical* in the treatment of burns:

℞.	Tinct. opii	℥iss	6
	Aq. laurocerasi	℥x	40
	Glycerini	℥iiss	75

M. Sig.: Apply constantly to the inflamed areas by means of compresses.

Lumbago.

The following combination, in *Med. Rev. of Reviews*, is recommended in the treatment of lumbago:

℞.	Tinct. iodi	℥ii	8
	Tinct. aconiti rad.	℥iii	12
	Spts. chloroformi	℥ss	15
	Linimenti saponis co. q. s. ad	℥iii	90

M. Ft. linimentum. Sig.: Apply locally several times daily.

Diphtheria.

E. Perrier, in *Annals de Med. et Chir.*, states, in the treatment of diphtheria, that the presence of suspicious spots on the tonsils or uvula demands the injecting of antitoxin at once. Irrigation of the upper-air passages should be practiced three or four times a day with a warm boric acid solution. Locally the following combination should be applied every two hours during the day and less frequently at night:

℞.	Acidi salicylici	gr. x-xv	.65-1
	Alcoholis	℥v	20
	Glycerini	℥i	30
	Infusi eucalyptus	℥ii	60

M. Sig.: Apply locally to the throat every two hours.

The patient should be nourished with milk, albumin water, chocolates and ices, as well as raw or cooked fruits. If alcoholic stimulation is required, champagne, sherry or port wine may be selected.

The following tonic is recommended:

℞.	Ext. cinchonæ	℥i	4
	Cognac	℥i	30
	Elix. simplicis	℥iv	120

M. Sig.: A teaspoonful to a dessertspoonful every two hours.

In case the nasal fossa is involved the following ointment may be applied:

℞.	Acidi boracici	℥i	4
	Liq. petrolati	℥i	30

M. Sig.: Apply locally.

In cases in which the diphtheritic membrane appears on the conjunctivæ the general treatment is the same, while the conjunctivæ are treated locally by the application of boric acid.

Medicolegal.

SOME LEGISLATION OF THE YEAR 1903.

Nevada—Requirements for Practice of Optometry.—Chapter 48 of the Laws of Nevada of 1903 provides that any person engaging in the optical profession in correcting ocular, muscular imbalances, errors of refraction, or other defects of vision, not requiring surgical treatment, shall apply to the state controller for a license and shall produce a certificate of graduation, and shall make affidavit that he is the person named therein, and that such certificate has been issued by a regularly chartered college, authorized to confer degrees, etc. The fee for a license is $10. Nothing in this act shall be construed as applying to regularly qualified medical practitioners, nor to persons who have been engaged in the optical profession in the state for one year preceding the passage of this act.

North Carolina—To Keep Mumps and Itch Out of Schools.—Chapter 690 of the Public Laws of North Carolina of 1903 amends Section 13 of Chapter 214 of the acts of 1893, providing that school committees, etc., shall not allow pupils to attend schools while members of their respective households are sick with certain diseases, or during two weeks after the death, recovery or removal of such sick person, Chapter 690 adding to the list of diseases mumps and itch.

North Dakota—Regulation of Practice of Optometry.—Chapter 130 of the Laws of North Dakota of 1903 is for the most part like the California act epitomized on page 1043 of THE JOURNAL, Oct. 24, 1903. But it contains as further causes for the revocation of a certificate the advertising himself as an eye specialist or doctor, or holding himself out to the public as being other than an optician, skilled in the art of optometry.

Oklahoma—Provision for Free Distribution of Vaccine.—Article 3 of Chapter 2 of the Session Laws of Oklahoma of 1903 appropriates $2,500 per annum, or as much thereof as may be necessary, for the manufacture of and free distribution within the territory of vaccine by the Oklahoma Agricultural Experiment Station at Stillwater.

Oregon—Reports Required.—On pages 82-86 of the General Laws of Oregon of 1903 is an act to establish a state board of health, etc., which provides, among other things, that it shall be the duty of every physician, midwife or head of a family, under whose charge any birth occurs, to report the same to the county or city health officer (as the case may be) before the last day of the month in which said birth occurs. Similar provisions require deaths to be reported within forty-eight hours, or as soon thereafter as practicable; and any infectious or epidemic disease to be reported immediately. The penalty for violation is a fine of from $10 to $100.

Pennsylvania—For Sanatorium for Poor Consumptives.—No. 430 of the Laws of Pennsylvania of 1903 appropriates $8,000 for the erection, fitting and maintenance for two years of a sanatorium for poor consumptives, on the state forestry reservation at Mont Alto, in Franklin or Adams counties, and authorizes the commissioner of forestry to make and enforce rules and regulations governing the same.

Pennsylvania—Limits Sale and Prescribing of Cocain.—No. 192 of the Laws of Pennsylvania of 1903 provides that no person shall sell, furnish or give away any cocain, or any patent or proprietary remedy containing cocain, except on the prescription of a registered practicing physician, or of a dentist, or of a veterinarian; nor shall any such prescription be refilled; nor shall any physician, etc., prescribe cocain, etc., for any person known to him to be a habitual user of cocain. The penalty is a fine of $100 or less, and imprisonment for six months, or less, both or either, at the discretion of the court.

Pennsylvania—School Buildings To Be Disinfected.—No. 132 of the Laws of Pennsylvania of 1903 states that, whereas, infectious and contagious diseases are very largely disseminated through the schools, from the want of proper disinfection of school buildings; therefore, it shall be the duty of the board of school directors, trustees, or other persons having control of any school or college building, to adopt and immediately put into operation a modern system, for the disinfection of such buildings; and to cause, at regular intervals of not exceeding two weeks, all of such buildings to be thoroughly disinfected. The system adopted shall be approved by the city board of health, or, there being no such local board, by the state board of health.

Pennsylvania—Provision for Commitment of Drug Users.—No. 153 of the Laws of Pennsylvania of 1903 is an act to authorize and provide for the commitment of persons habitually addicted to the use of an intoxicating liquor or drug to a proper hospital or asylum, for restraint, care and treatment. The petition shall be accompanied by the affidavits of at least two physicians, based on examination by them of the alleged drunkard, setting forth his condition and stating that restraint, treatment, etc. in a hospital will be of benefit, which physicians must also appear at the hearing given the case. But the restraint shall not be continued in any case longer than one year, and all commitments shall be reviewable by proceedings under writ of habeas corpus, which may be sued out at any time. Furthermore, no person shall be commited, or be admitted into any hospital, etc., until payment has been made, or satisfactory security given, for the proper charges for board, treatment, etc.

South Carolina—Ban on Toy Pistols and Caps.—Chapter 79 of the Laws of South Carolina of 1903 provides that it shall be unlawful for any person, firm or corporation in the state to sell, keep for sale or offer for sale, or give away, any toy pistol, in which caps or cartridges are used, or any caps or cartridges therefor. The penalty for violation is a fine not exceeding $100, or imprisonment (in the case of an individual) for not over 30 days.

South Dakota—To Prevent Abuses in Vaccination.—Chapter 223 of the Laws of South Dakota of 1903 makes it unlawful for any board, physician or person to compel another by physical force to submit to vaccination with smallpox or other virus. No person shall prevent a child of school age, who furnishes a physician's certificate of sucessful vaccination within five years, from attending public school. The penalty for violation is imprisonment for not more than thirty days or a fine of not more than $100 or both.

Texas—Restriction on Prescribing Cocain, Etc.—Chapter 115 of the General Laws of Texas of 1903, regulating the sale of morphin, opium, cocain, chloral or any of the derivatives thereof, provides that any physician or person who shall give any prescription therefor to any person known to be a habitual user of the same, except in cases of actual sickness, shall be fined from $25 to $250, and may in addition be imprisoned in the county jail not exceeding six months.

Texas—Creates a Pasteur Hospital.—Chapter 125 of the General Laws of Texas of 1903 appropriates $5,000, or so much thereof as may be necessary, for the erection and maintenance of a Pasteur department for the treatment of hydrophobia in the state, in connection with and under the management of the state lunatic asylum at Austin. Any person affected with hydrophobia within the state shall be admitted for treatment on the certificate of a practicing physician and the recommendation of the county judge of any county. All indigent patients shall be treated and maintained at expense of the state, but all non-indigent patients at their own expense, or that of their relatives, friends or guardians. The laws pertaining to the introduction and control of such patients shall be the same as those of the Austin asylum.

Utah—Children Forbidden to Have Tobacco, Etc.—Chapter 135 of the Laws of Utah of 1903 provides that any person under the age of 18 years who shall buy, accept or have in his possession any cigar, cigarette or tobacco in any form, or any opium or any other narcotic in any form, shall be guilty of a misdemeanor

Utah—Restriction on Location of Pest-Houses.—Chapter 36 of the Laws of Utah of 1903 provides that no pest-house, hospital, etc., used to confine persons having or suspected of having any contagious or infectious disease, shall be located or maintained within twenty rods of any public road, or within one-fourth mile of any uncovered canal, ditch, flume, etc., conveying running water only, if said water is conveyed into, or used by the inhabitants of any city, town or village, for culinary, household or other domestic purposes.

Utah—Disinfection Required in Typhoid Fever Cases.—Chapter 81 of the Laws of Utah of 1903 makes it the duty of any person having charge of a person with typhoid fever to disinfect all excreta from the person during the disease, in accordance with the rules of the state board of health; failure so to do shall be a misdemeanor. It shall be the duty of the physician in attendance to personally instruct those having charge to perform the disinfection described and to satisfy himself that the same is properly carried out; failure so to do shall be a misdemeanor.

Wyoming—On Sale and Prescribing of Delirifacients.—Chapter 98 of the Session Laws of Wyoming of 1903 makes it unlawful for any person, corporation, etc., to sell, give away, or

possess, or in any manner distribute, any cocain, opium chloral hydrate, or their derivatives, or any drug or combination, the natural effect of which is to induce delirium, or any patent or proprietary medicines, known to contain any drug, or derivatives thereof, heretofore mentioned; except that regular licensed pharmacists may keep for sale and sell such drugs, on the bona fide written prescription of a regular practicing physician, which prescription must not be repeated or refilled. Any physician who shall prescribe any of the drugs herein mentioned, except in cases where the use is required by the then existing physical or mental condition of the patient, shall, on conviction thereof, be deemed guilty of malpractice and unprofessional conduct, and it shall thereon be the duty of the State Board of Medical Examiners to revoke his license to practice.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

November 28.

1. *The Use of Weak Cocain Solutions in Operations for the Removal of Cervical Tumors. Frederick Griffith.
2 *The Early Operative Treatment of Tuberculous Osteitis of of the Knee. (Concluded.) Bernard Bartow.
3 *The Treatment and Management of Postoperative Tuberculous Patients and a Plea for the Establishment of Seaside Sanatoria and Convalescent Homes. S. A. Knopf.
4 *The Treatment of Acute and Subacute Anterior Gonorrhea by Retrograde Injections of Stronger Solutions of Silver. (Continued.) Hermann G. Klotz.
5 *Ocular Headache and Other Ocular Reflexes; a Statistical Study. (Concluded.) M. W. Zimmermann.

1. Cocain Anesthesia.—Griffith reports a number of cases of cervical tumors removed under weak solutions of cocain, ¼ to ⅛ per cent. in a warm, weak, soda solution. In one of the cases ether supplemented the cocain on account of the nervousness of the patient. In the others there seemed to be little or no pain during the dissection.

2. Tuberculous Osteitis of the Knee.—Bartow's article is concluded in this issue, and the paper consists mainly of accounts of cases. The range of preservation of movement in the recovered cases was from complete functional restoration to limitation of the movement within 15 degrees of flexion. Between these extremes are 4 cases in which there was free flexion of from 60 to 90 degrees from the straight position of the leg. In a patient with less motion range it is susceptible of further improvement by movement during anesthesia.

3. Post-Operative Tuberculous Patients.—Knopf's article is a very long one, covering the whole subject of the hygiene of tuberculous patients after operation. He describes the methods for the open-air treatment and exercises, and insists on deep breathing movements as soon as possible after the patient is removed from the table, to restore the respiratory function and facilitate hemostasis and expectoration and relieve the cough. It also prevents hypostasis of the lungs often produced by the prolonged recumbent position. There should be individualized hydrotherapy. Rest in the open air is considered of special importance. The dietetic treatment must vary with the cases. He believes in a mixed, nourishing diet with thorough mastication and avoidance of all alcoholics and too much sweets; plenty of salt with the food, and between meals plenty of water. The administration of raw beef or beef juice will be of benefit in all types of tuberculosis. A great factor in the success is the keeping up of perfect nutrition; massage is valuable in suitable cases. It would be impossible, however, he says, to lay down a rule when it is or is not indicated after surgical operations. He goes at length into the precautions that should be taken to avoid infection, the care of the sputa, etc. In conclusion he makes a plea for convalescent homes for the poor who have undergone surgery.

4. Gonorrhea.—Klotz' article is continued. He describes the method of treatment in the various forms and stages.

5. Ocular Headache.—Zimmermann's article is here concluded. He gives a tabulated statement of the results of re-examinations after six months or more, the average being 2.88 years. These offer some interesting data. He also tabulates cases where there was a lack of binocular vision in the first place, either due to a loss of an eye or divergent strabismus, and in which ordinary muscle action would seem to be eliminated. This group shows a much smaller percentage of headaches than that of the larger groups with binocular vision. The influence of ill health as a predisposing cause of ocular headache is also studied, and it is found to occur in 19.16 per cent. Neurasthenia, general nervousness or general ill health seemed to be prominent causes, though grippe also played a considerable figure. Migraine, understanding by this term a form of periodic headache preceded by aura, occurred in 33 cases, excluding 35 cases of hemicrania without nausea and vomiting, 25 of bilateral headache in which these symptoms appeared. Eight patients reported complete cures of migraine attacks for a reasonable period, and in 3 cases a certain degree of relief was obtained by the proper adjustment of glasses. He remarks that oculists have perhaps been too indifferent to the headache habit with which neurologists are well acquainted. During the early wearing of new glasses, while the eye and its ciliary muscle are adapting themselves to new conditions, great benefit results from the use of very dilute applications of a meiotic, eserine salicylate, 1/20 to 1/50 of a grain to the ounce. He thinks this, perhaps, acts as a tonic to the ciliary muscle and has a tendency to steady its erratic action under new conditions. With these weak solutions there is very little effect on the pupil. They are not irritating to the iris or other uveal structures, and are for temporary use only. With periodic headaches, some of the coal tar group, the preparation given at the onset of the attack may be of great benefit. The tabulated statement of other reflexes than headache, including epileptiform attacks, vertigo, shoulder pain, abnormal head position and blepharospasm, is also given. In one of the cases of epileptiform attacks ocular treatment seemed to produce a cure. The total results of treatment are rather hopeful. In 233 hospital cases and 451 private ones a complete cure is reported, also 29 and 61 per cent., respectively, of improvement. Only 20 cases were not improved. He thinks that the 86 per cent. of cures is a good result, not meaning by this absolute cures, though that is commonly the outcome, but such a modification of symptoms that the patient does not suffer any annoyance which can not be controlled by hygiene.

American Medicine, Philadelphia.

November 28.

6 *What Is the Limit of Safety When More Than One Operation is Indicated? Albert Vander Veer.
7 *The Roentgen Rays as a Palliative in the Treatment of Cancer. Charles Lester Leonard.
8 *The Demonstration of Nucleated Red Blood Corpuscles in Animal Spleens. Edward T. Williams.
9 *The Spectroscopic Elements of Light as Therapeutic Agents. George G. Hopkins.
10 *Abdominal and Pelvic Surgery Without Ligatures. Electrothermic (Heat and Pressure) Hemostasis. Andrew J. Downes.
11 The Effects of the Secondary Static Currents in Removing Albumin and Casts from the Urine, with Report of Cases. Boardman Reed.
12 Status of Sanitary Progress. Walter Wyman.

6. Multiple Operations.—The dangers of multiple simultaneous operations are pointed out by Vander Veer who, while he admits the possibility of recovery in such cases, thinks the dangers are increased. The danger to certain nervous tissues in doing what we call a combined operation must not be lost sight of, and any operations that approach the stomach, that involve the small nerve centers, are especially to be respected. Operations on the genitals of males are not well borne, and he thinks the same should be true in the female, though gynecologists are quite free in making multiple operations in these cases. In the operation of nephrectomy he does not like to do more than one operation on one patient at one time, and the same holds good in operating on the lung or opening the pleural cavity. One operation on the brain is quite enough. He concludes by

saying that he believes extreme multiple operations, deliberately planned, should not be encouraged, although the surgical technic of to-day allows us to do more than was even dreamed of in the near past.

7. **Cancer.**—Leonard believes that the *x*-ray should be used in cancer, though we can not give up surgical measures with our present knowledge. The rays should be used in combination. The palliative effects of the rays also are important. He insists on the necessity of correct technic, a careful study of the patient's condition, use of stimulants, a tonic course of treatment if necessary to combat the tendency to degeneration of the cells and possibly auto-intoxication. He says he has seen inoperable cases of cancer cured and remain cured thus far, and hopelessly inoperable cases restored to such health as to be able to resume their ordinary vocations, while the fatal termination in hopeless cases has been deferred and the suffering mitigated. The results thus far are very encouraging. A prophylactic postoperative course of treatment has been developed that will doubtless increase the number of cures, while as a palliative agent there is nothing else equal to it.

8. **Red Blood Corpuscles in the Spleen.**—Williams has experimented on the spleens of hogs and oxen and finds that the erythroblasts are a constant anatomic element in these structures. He has not yet been able to examine a fresh human spleen, opportunity for which is not too common, but thinks we need further evidence before we can say that this organ in man has lapsed into a rudimentary state and is incapable of making red blood corpuscles. When an authority like Neumann positively states that he has seen erythroblasts many times in the spleen of human adults and distinctly expresses his dissent from Kölliker, we are evidently nearing the verdict.

9. **The Spectroscopic Elements of Light.**—Hopkins notices the history of the light treatment and describes the effects that he has himself obtained with the Finsen light, the Minim light, the Hopkins lamp and the German light bath.

10. **Electrothermic Hemostasis.**—Downes' article is a description of his methods and armamentarium, and a new record of cases up to the present time.

Medical Record, New York.

November 28.

13 *Electricity in General Practice. W. B. Neftel.
14 *Suprapubic Lithotomy. J. J. Brownson.
15 *Treatment of Cervical Adenitis Due to Tonsillar Infection. Albert E. Rogers.
16 Perineal Section for Stricture, with Suggestions on the Use of the Cautery, and Points in the After-treatment. Charles C. Miller.
17 Foreign Bodies in the Rectum, with Report of Two Cases. Maurice Rosenberg.

13. **Electricity in General Practice.**—Neftel reviews the utilization of electricity according to the older methods of galvanism and faradism as they can be employed by the physician in general practice. He notices the use of faradic currents as being a local and general stimulant and tonic, and affecting general nutrition, while galvanism acts more directly on the nerves and nervous centers, modifying their excitability. The contraindications to both are fevers and acute inflammatory disease. The different methods of application are described, faradization of phrenic nerves in cases of suspended animation and of the nerve trunks in the treatment of writers' and piano players' cramp, in visceral displacement and dilatation, in hernia, general anemies, etc. He also gives instances of the use of galvano-faradic currents in atrophic conditions and of faradic currents in heart disease. Galvanization of the brain and the sympathetic nervous system and pneumogastric are illustrated by examples and the use of the galvanic current in neuralgia. In neuritis the faradic current is indicated. The methods are described much as in the usual text-books on electro-therapeutics.

14. **Suprapubic Lithotomy.**—Brownson advocates the use of the suprapubic method in lithotomy, claiming that the danger of hemorrhage is not so great; there is no fear of wounding the rectum; the peculiar and delicate nerve supply of the perineum is not disturbed, moreover, and the operator has better control of the bladder by the suprapubic method. After operation he would use drainage except, perhaps, in young and vigorous persons with healthy bladders, where the catheter can be employed.

15. **Cervical Adenitis.**—In case of cervical adenitis from tonsillar infection Rogers advocates removal of the tonsils, and advises that in all cases in which the glands have not already broken down, the surgeon should first extirpate the tonsil before resorting to incision through the skin, thus removing a primary source of infection and avoiding an unsightly scar. Five cases are reported.

Boston Medical and Surgical Journal.

November 26.

18 *The Treatment of Diffuse Peritonitis. B. F. Lund.
19 *A Clinical Study of 112 Cases of Movable Kidney. Ralph C. Larrabee.
20 *Diseases of House Officers in Hospitals. William R. P. Emerson.
21 *Unclean Milk, Bovine Tuberculosis and the Tuberculin Test—Their Relation to the Public Health. (Concluded.) E. R. Larned.

18. **Peritonitis.**—The starvation method of treating peritonitis described by Ochsner and others is not favored by Lund, who insists on the importance of early operation, with thorough irrigation with decinormal salt solution at a temperature of 110. He is also an advocate of gauze drainage, as these wicks, used even only a few hours, by capillarity will remove a large quantity of fluid, some of it presumably septic. The irritating effect of the gauze causes immediately after the drainage of the fluid the formation of adhesions which wall off the infected area and prevent further reinfection. For drainage of the pelvis he uses gauze wicks, and among them places a glass tube, not on account of its value as a drain, but to keep the gauze in the original position and prevent its being entangled by intestinal movement. He also advocates the elevation of the head of the bed, and his own experience with this has been satisfactory. Reference is also made to an article on enterostomy in selected cases of peritonitis, published in THE JOURNAL for July, 1903. The procedure has proven effective in desperate cases. For details the reader is referred to the original. In looking over his records he finds he has operated in 34 cases of general peritonitis, not including cases covering only a slight area; 23 of these were due to perforative appendicitis, of which 10 recovered and 13 died, most of the fatal cases being in a very poor condition. Of the 11 remaining cases 4 were due to salpingitis; 1 recovered and 3 died; 1 due to perforative typhoid ulceration also died; 2 to rupture of the intestine by external violence, with 1 recovery and 1 death; 1 to perforated gastric ulcer, which recovered; 1 fatal case due to perforating duodenal ulcer; 1 to perforation of the posterior cul-de-sac by a splinter of wood introduced through the vagina. This forms a total of general peritonitis from all cases of 34 cases, with 20 deaths. The mortality of the early cases has been low, and it should be remembered, as stated above, that a number of cases of slight peritonitis were not included in these figures. In view of the recent advocacy of the rest treatment of peritonitis and of the great conflict of opinion as regards the methods, he thought it best to present his reasons for his own attitude on the subject.

19. **Movable Kidney.**—One hundred and twelve cases of movable kidney were detected in 272 out-patients at the Boston City Hospital during Larrabee's four months' service in 1902, children not included. The right kidney alone was affected in 98 of the 112 cases. Movable kidney seems to be most frequent in young adult life, but there were 5 cases over 60 years of age and 1 over 70. Of the 93 Americans in the series, 37 per cent. had this condition; of the 69 Irish, 51 per cent.; of 41 natives of British provinces, 49 per cent., and of 22 Russian Jews, 30 per cent. It was found a little more frequently in the married and widowed than in single women, though the difference was not very great. Fifty of the cases were multiparæ; 1 a unipara; 51 had never been pregnant. The cases showed markedly the effects of emaciation as a causal factor. Trauma was given as a probable cause in one instance, and all but 9 patients wore either cor-

sets or other constricting articles of clothing. The symptoms were not characteristic, but were as noticeable in cases without floating kidney as in those with it. In no case was there any evidence of hydronephrosis, gangrene, malignant disease, severe hemorrhage or other serious complication. Treatment was thought unnecessary in 87 of the 112 cases, and the patients were not informed of the presence of the anomaly. In 1 case in which this was inadvertently done, symptoms immediately appeared. Two women were advised to wear different corsets; 25 were advised to wear swathes, this being rather for the enteroptosis or laxity of the abdomen in some of the cases. Surgical treatment was not advised in a single instance. Lund says that with over two-fifths of the women of certain classes having movable kidney one ought to be very cautious in attributing such common indefinite symptoms as backache, dyspepsia and neurasthenia to this cause, and when a movable kidney is found it should be borne in mind in treating the case, but unless there is reasonable ground for attributing tne symptoms to this it is best not to draw the patient's attention to its existence. The frequency and innocuousness of the lesion would seem to refute the extreme surgical view. Nephrorrhaphy undoubtedly has its place, especially in serious complications such as hydronephrosis or pyonephrosis or severe crises. It is justifiable where there are disabling symptoms that can not be relieved otherwise or when the patient prefers the risk of operation to the discomfort of bandages. It should be remembered that temporary bandaging may tide over a condition of debility during which these symptoms have appeared. Particularly in cases where the symptoms are predominently nervous, one should not advise operation unless the condition and symptoms can be attributed with a reasonable certainty to the lesion.

20. **Diseases of the House Officers in Hospitals.**—Emerson has studied the mortality statistics of house physicians and surgeons in the Boston City Hospital for the past ten years. While the number of cases has been too few and the time too short to offer definite conclusions, the records of the medical and surgical services, 60 men each, and contagious, 70 men, would indicate that the danger of house officers having pneumonia, phthisis or typhoid is very small, only one of these cases occurring in the medical service, and then in an individual of low resistance. The nasopharyngeal and febricular affections occurred in the ratio of 12 in the medical staff to 1 either surgical or pathologic. The danger of infection in the examination of moist cultures and sputum is very slight, and there is little evidence in the ten years' records that a house officer's general condition is a marked factor in the question of infection by a contagious disease. In six months' service the chance of a member of the service taking diphtheria infection, including mild cases, is one in two, of scarlet fever, one in seven. The influence of improved living quarters and facilities for proper exercise on the health of house officers is marked. It should be urged on house officers that the sense of fatigue occurs more often as a result of nervous tension and indoor air than of muscle exhaustion, and that it is relieved by proper exercise and baths. The tabulated comparison of the conditions at the end of service of men who exercised and men who did not is so striking as to demand that the attention of all similarly situated persons be given to this matter.

21. **Bovine Tuberculosis.**—Larned concludes his article in this issue, and insists on the importance of the tuberculin test by which it is possible to very materially reduce tuberculosis in cattle and, it may be, to eventually exterminate it.

Medical News, New York.

November 28.

22 *Diet and Drugs in Nephritis. William S. Gordon.
23 *Mastoid Disease and Cerebellar Abscess. Seymour Oppenheimer.
24 *A Discussion of Some Common Forms of Liver Disturbances. A. P. Stoner.
25 *The Best Method of Dealing with the Stump in Appendicectomy. Howard Lilienthal.
26 *Chronic Villous Arthritis, with Special Reference to Its Etiology and Pathology. (Continued.) Charles F. Painter and William G. Erving.
27 Primary Osteoplasty in Open Fractures or Fracture Dislocations. Thomas H. Manley.

22.—See also abstract 36 below.

23. **Mastoid Disease and Cerebellar Abscess.**—Oppenheimer describes the conditions and mechanism of cerebellar abscess from mastoid disease and the general treatment of the condition, pointing out that it may be, in the second stage, practically latent for a considerable time. The third stage supervenes with the symptom group characteristic of severe otitic intracranial infection, the symptoms sometimes pointing to the localized cerebellar abscess, but more frequently the condition is only localized after operation. When the first stage is not recognized and the intracranial condition continues without surgical relief, the fourth or the terminal stage is one of gradual death from exhaustion and coma, or sudden, according to the direction in which the abscess ruptures. The first stage is characterized by the symptoms of acute infection and extension of mastoid suppuration to the intracranial contents. The detailed symptoms are given at length. The diagnosis of cerebellar abscess is not always possible by local symptoms: Occipital headache, temperature slightly elevated, normal or subnormal, sometimes nystagmus and paralysis of the sixth nerve, cerebellar ataxia and vertigo if the vermis is affected, a rapid loss of flesh and strength, etc. The multiplicity and confusion of symptoms is very marked. The treatment is necessarily surgical. After the abscess has formed the best plan is to first open and explore the mastoid cells and, failing to find the cause, open the cranium in the groove for the lateral sinus and so obtain access to both the middle and posterior fossæ. A bibliography of 65 references is appended.

24. **Liver Diseases.**—Stoner describes the various conditions of liver disease. Hyperemia he thinks is seldom caused by the two factors to which it is sometimes credited; suppression of menses and hemorrhoidal bleeding. Cirrhosis he accepts as usually the result of infection, either direct or indirect. Alcohol is frequently responsible for the condition even in children. In many cases abnormal fermentation in the bowels is responsible.

25. **Appendicectomy.**—The criticisms of the method of ligation and cauterization of the stump are answered by Lilienthal, who holds that ligation cuts through the mucosa, and in this ways permits occlusion by union of the submucous coats. In cases where there is great infiltration of the walls, with friability, it is best to bluntly crush the rigid root of the organ with a clamp or forceps and then apply the ligature to the crushed tissues. Of course this can not be done with complete gangrene of the stump. The second criticism, that adhesions are apt to form with a stump of this kind, is, he thinks, based on insufficient evidence. He has had the chance of examining post-operative conditions in a number of cases treated by ligation and cautery, and 3 cases of fatal peritonitis examined from three to six days after operation showed adhesions everywhere else but not at the stump, which could not be found. It had been cast off with its ligature, and only a smooth cicatrix on the surface of the cecum remained. In a number of other patients on whom subsequent operations for other conditions were undertaken months and even years after the removal of the appendix, the only evidence of the ligature was a smooth, white cicatrix; no adhesions whatever. He believes, therefore, that the treatment of the stump by the method of ligation is the only way in which adhesions may be avoided. The cauterization he uses is that by strong carbolic acid. A minute drop of the 95 per cent. solution is taken up with a closed artery clamp as ink is taken up with a pen, and after protecting the surrounding tissue with gauze the acid is thoroughly applied two or three times to the mucous lining of the stump until the little funnel is completely whitened. In from fifteen to thirty seconds the stump may be dropped back into the abdominal cavity with no danger to the other structures that may come in contact with it. This method of treating the stump has stood a satisfactory

test in his experience in many hundred operations during the past ten years.

26. Chronic **Villous Arthritis.**—Painter and Erving's article is concluded in this issue. They find that chronic villous arthritis is not a disease of itself, as has been claimed, but occurs associated with chronic diathetic disease involving other tissues, and is representative in such cases of the same pathologic changes that subsequently occur in other structures of the joint. The two principal diatheses which cause this are rheumatoid arthritis and osteo-arthritis. The villous changes are the symptoms, not the disease itself. Traumatism entirely apart from any diathesis, is capable of giving rise to a local villous hypertrophy which goes on to a dense fibrous growth and keeps the joint in a constant state of injury from its traumatic effects. Traumatism associated with an osteo-arthritic diathesis, is frequently the excitant of local synovial hypertrophy, but these changes are more the result of the traumatism than of the stirring-up of the diathesis. Stout flabby adults with pronated or flat feet are more liable to the type of fringe which undergoes fatty degeneration with a minimum amount of fibrous change. This may occur with pregnancy and with the tissue relaxations of nervous prostration and the "soft" condition of so many rapidly-growing and sickly children at the period of puberty. Alteration in the mechanism of weight bearing is not the prime cause of this condition in many of the knee cases, though a frequent contributing factor which should be considered in the treatment, but simple flat feet or pronated feet can hardly cause this condition alone. The operative treatment in selected cases gives eminently satisfactory results when it is fully understood what the operation contemplates. Conservative treatment in suitable cases, though a very small class, gives equally good results. The main thing is to distinguish between the two classes. Judging from the pathologic findings, the condition is the result of a chronic inflammatory process which, acting on the normal villi, cause their hypertrophy with increase of the blood vessels. This becoming chronic on account of the continuation of toxic cause or to intermittent or slight trauma, the vessels are unable to supply the needs of the new tissue, being thus affected by inflammation. They therefore become gradually obliterated by endarteritis with almost complete loss of blood supply and the disappearance of normal fibrous tissue. The latter either undergoes necrosis and hyaline degeneration, or disappears, leaving the tissue that can be nourished by a limited supply of blood, usually the adipose. In this necrotic condition separation of the pedicle and the formation of a loose joint body can easily occur.

Cincinnati Lancet-Clinic.

November 28.

28 *Typhoid Gangrene of the Lower Extremities—134 Cases—Spontaneous and Surgical Amputations. B. Merrill Ricketts.
29 *Malaria. George J. Monroe.
30 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

28. **Typhoid Gangrene.**—Ricketts begins his article with a few remarks on the pathology and treatment by amputation. The most favorable cases for this latter are those involving the toes and feet and lower leg during convalescence, and he gives abstracts of reported cases. Spontaneous amputation should not be encouraged, as a rule, though in a few cases in the aged it should be carefully considered. The article is to be concluded in the coming issue.

29. **Malaria.**—Monroe reports a case which apparently in the beginning was that of phthisis and treated accordingly, but it subsequently showed symptoms of malaria controllable by quinin. All the lung symptoms and physical signs disappeared. The patient was an excessive smoker, which is mentioned in connection with the case, though no deductions are drawn.

St Louis Medical Review.

November 21.

31 Necrosis of the Lacrymonasal Duct. J. C. Buckwalter.

November 28.

32 *Gymnastics in Medicine. F. W. Abeken.

32. **Gymnastics in Medicine.**—Abeken advocates the use of exercise in various conditions, notably diabetes, and other conditions beginning with disturbances of metabolism. He specially insists on their prophylactic value.

Bulletin of the Kentucky State Medical Association, Louisville.

November.

33 *Colles' Fracture. Fred D. Cartwright.
34 *Fractures of the Femur. H. P. Sights.
35 A Method of Dealing with Fractures. J. B. Taulbee.

33.—This article appeared elsewhere. See THE JOURNAL of August 22, title 144, p. 523.

34. **Fractures of the Femur.**—Sights concludes that while experience and teaching have been discouraging as regards fracture of the neck of the femur, yet with appropriate treatment we may expect bony union. Age is not a contraindication to treatment. The best results are obtained from perfect immobilization and approximation. The plaster-of-paris cast and Buck's extension are not the best methods. The use of suspension apparatus is more comfortable to the patient, convenient to the nurse and favorable as to results. Old ununited fractures can only be relieved by operative treatment, and in these the *x*-ray gives valuable aid.

St. Louis Courier of Medicine.

November.

36 *Diet and Drugs in Nephritis. William S. Gordon.
37 Induction of Labor by Means of a Modified Champetier de Ribes' Balloon. Herbert Old.
38 Anemia Infantum Pseudoleukemica (von Jaksch). George M. Tuttle.

36. **Nephritis.**—Gordon insists on the value of the diet in nephritis, and believes that gout and lithemia are responsible for a large number of cases. He considers that the milk diet should often be discontinued as furnishing too much urea. It also fails to supply the blood with sufficient nourishment or sets up lactic or butyric fermentation. No routine diet should be adopted. In many cases, however, an exclusive milk diet is of value. His own rule is to regulate the diet so as to obtain a normal urine. As long as the urine is normal the kidney will in the majority of cases improve. He remarks as regards nitrogenous foods that fowl, game, fish and eggs are liable to be as bad as butcher's meat in these cases, and especially eggs, which have been disastrous in some cases in his experience. He is not a skeptic as regards drugs, and insists on the use of diuretics and diaphoretics, and extols the good effects of cholagogues, in acute cases especially, and in chronic cases when diaphoresis or diuretics are contraindicated. For emergencies pilocarpin stands by itself. Nitroglycerin is sometimes invaluable in acute cases, and iron is pre-eminent in cases where anemia has set in and the blood vessels need to be nourished. As regards the preparation, he still favors the old tincture of the chlorid. When it fails, other preparations may be used. In anemic convulsions, chloral hydrate and the bromids are useful. He does not hesitate to use morphin where required. Veratrum viride is a drug with which he has had limited experience, but its virtues as a reducer of pulse tension are well established. In acute inflammatory conditions with strong pulse, aconite is valuable. For the debility of subacute and chronic nephritis, stimulation must be employed, and alcohol may be beneficial in elderly people—best given with the food. Strychnin is useful in many cases when the pulse is soft, thin and frequent. Taken all in all, it is the best remedy in our possession for weakness and exhaustion of the nervous system, while with hypophosphites it will stimulate with results unattainable by either drug alone.

The Laryngoscope, St. Louis.

November.

39 The Tonsil at Birth. Harris P. Mosher.
40 *Adenoid Growths with Special Reference to Adult Conditions James E. Logan.
41 *Gangrene of the Tonsil. Charles W. Richardson.
42 A Synopsis of My First Hundred Mastoid Operations. C. Barck.
43 Progress in Otology in Fifty Years. Fayette C. Ewing.
44 Naso-pharyngeal Fibroma—Exhibition of Specimens and New Forceps. J. A. Stucky.
45 The Tonsil Snare. W. H. Peters.

40. **Adenoids in Adults.**—The points brought out by Logan are summarized by him in substance as follows: (1) The importance of early recognition of adenoids in children by the general practitioner. (2) Their prompt removal when extensive or interfering with the development of the child, especially in case of exposure to exanthemata. (3) When present in patients suffering from eruptive diseases, attention must be directed to proper disinfection of the pharyngeal vault. (4) In patients exhibiting enlarged faucial glands there generally exist hypertrophies in the vault—the reverse condition does not always obtain. (5) That hypertrophy of the pharyngeal glands in adults is not rare. As a rule, it is dependent on pharyngeal changes during childhood, and is not developed after puberty. (6) That operative interference is warranted in every instance not only to relieve existing dependent conditions, but to prevent impending complications.

41. **Gangrene of the Tonsil.**—Richardson reports a case and remarks on the scantiness of the literature on the subject. The patient died of extreme sepsis. Antitoxin proved ineffective. From a clinical history of the case he thinks diphtheria was not the cause. If it was a case of spirillum infection, it was certainly a very marked manifestation. He is inclined to consider it the result of quinsy, with streptococcic infection causing gangrene and destruction of the tissues.

Interstate Medical Journal, St. Louis.

November.

46 *The Present Status of Stomach Surgery. A. J. Ochsner.
47 *Complete Obstruction of First Portion of Duodenum Due to Gallstones—Report of Case. Paul Y. Tupper.
48 Removal of a Five-cent Piece from a Strictured Esophagus. A. V. L. Brokaw.
49 *The Hypodermic Use of Mercury in Syphilis. S. P. Collings.
50 *Pancreatitis Diabetica. Francis T. B. Fest.

46. **Stomach Surgery.**—In most cases of diseases of the stomach requiring surgical interference there is defective drainage, though not infrequently extra-gastric conditions give rise to the symptoms. The diagnosis is described by Ochsner, who calls attention to gallstones as the first possibility of confusion, and points out the differences between their symptoms and those of gastric ulcer, such as pain to the right around the side and back and in the vicinity of the liver, pain and tenderness between the junction of the ninth rib and its cartilage and the umbilicus. He also remarks as regards gastric crises of locomotor ataxia. All of the stomachic conditions can be relieved by making a gastroenterostomy between the lowest point of the stomach and the jejunum, large enough to permanently drain the organ. For this purpose he advocates the McGraw elastic ligature which he has used in his last 34 cases. It is easy of application, the fact that neither the intestines or stomach are opened and that the anastomotic opening can be made long enough to prevent future obstruction due to its contraction are advantages. He says:

1. A round rubber cord 2 mm. in diameter, made of the best material, should be used. 2. A posterior row of Lembert sutures is applied. 3. A long, straight needle armed with the rubber ligature is passed into the lumen of the intestine and out again at the desired distance, from 5 to 10 cm. away from the point of introduction. 4. While an assistant holds the intestine the surgeon stretches the rubber in the needle, and when quite thin draws it rapidly through the intestine. 5. The same step is repeated through the stomach. 6. A strong silk ligature is placed across and underneath the rubber ligature between the latter and the point where the stomach and intestine come together. 7. A single tie is made in the rubber ligature after the latter has been drawn very tightly. 8. The silk ligature is passed around the ends of the rubber ligature where they cross and tied securely three times. 9. The ends of the latter are released and cut off, being held by the silk ligature. 10. The Lembert suture is continued around in front until the point of its beginning is reached, where it will be tied. 11. Care must be exercised to prevent tying the rubber too far backward, and thus getting behind the posterior row of Lembert sutures.

He is thus explicit in describing the steps of the operation since he finds that a thorough familiarity with the method seems to give good results. He has not had satisfactory experience with the pyloroplasty, but the Finney method is undoubtedly the best, and it should be restricted to cases where there is a sufficient amount of tissue to make the new pyloric opening very large. Pylorectomy will, he thinks, be more and more employed and should always consist in the excision of more than 3 cm. of duodenum beyond the malignant growth and the removal of at least two-thirds of the stomach together with the lymphatics and the lesser omentum, even when the carcinoma is not advanced. This is important because the lesser curvature of the stomach is likely to be infected to a considerable distance from the original growth even in the earlier stages. Gastrectomy can be indicated only in a very small number of unusual cases. Gastrostomy is indicated in all cases of obstruction of the esophagus due to carcinoma in which starvation is imminent, and in cases suffering from benign stricture which can not be dilated from above. This operation is here indicated for the purpose of making retrograde dilatation. It is not likely that gastroduplication will ever again be in favor in the future. Elevating the stomach in gastroptosis is an operation still to be tested, though some authors, notably Beyea, speak well of it. Ochsner's own observation has convinced him that in severe pathologic lesions which can not be relieved medicinally in a reasonable period, nor traced satisfactorily to a neurosis not secondary to gastric disease, nor to other conditions mentioned, surgical treatment is indicated and should be undertaken reasonably early.

47. **Obstruction from Gallstones.**—Tupper reports his case and discusses others in the literature. He concludes from the whole that when bowel obstruction occurs in patients who have had inflammatory trouble in the region of the right hypochondrium, erratic gallstones are to be considered as a probable factor, and more probably in a woman past middle life. On account of its proximity and the fixedness, the duodenum is the most frequent avenue of escape for calculi ulcerating from the gall bladder. The colon is next in order. Other portions of the small intestine are rarely perforated. The calculi entering the duodenum are generally carried farther into the small intestine and arrested in their progress by the gradual diminution in the lumen of the bowel. Gallstones ulcerating in the colon rarely cause obstruction, but are usually passed readily per rectum. When gallstones smaller than the lumen of the intestine cause obstruction, it is probably because of the so-called "decubital irritation and angulation" of Pilcher. The site of bowel obstruction can be often approximately located by symptoms such as the presence or absence of meteorism and the presence or absence of bile and feces in the vomit. The lower portion of the small intestine is frequently the site of obstruction caused by migrating gallstones. Lodgment in the lower duodenum is rare. Lodgment in the duodenum between entrance of the bile duct and the pylorus must be exceedingly rare. He found no case on record except the one here reported. The character of the obstructing body in this case was also unique in that it consisted of a collection of faceted calculi rather than the single large gallstone usually found.

49. **The Hypodermic Use of Mercury in Syphilis.**—Collings advocates the hypodermic use of mercury. After considerable experimentation he has adopted the following solution made up in a 2 per cent. solution of chloretone:

℞.	Hydrargyr bichloridi, C. P.....grs. viiss	50
	Sodii chloridi.....grs. iv	25
	Aquæ destil, fl.....3i	4

Mix and make a solution by gentle heat.

	Chloretone .....grs. viiss	50
	Aquæ destil, fl.....3v	20
	Alcoholis absoluti.....min. xv	1

Dissolve chloretone in 20 c.c. distilled water, add alcohol and, finally, add the mercury and sodium solution. Shake well and filter.

This makes a 1 to 50 solution of bichlorid, 10 minims representing 1/5 of a grain. It can be given in doses of 5 minims up to 20 or even 25. He gives directions as regards antisepsis and advises the use of the "Sub Q" syringe for injections. The cases to be selected for this treatment are largely those where there is a necessity for the patient to be rapidly brought under the influence of mercury, such as the pernicious or malignant cases, and cases of rapidly destructive lesions, cases of impending paralysis and many cases of cerebral syphilis. It is indicated in fact in all emergency cases unless there are serious contraindications, such as kidney disease. The question of its use as a routine treatment should be decided by each attending physician.

50. Diabetic **Pancreatitis.**—Fest reports a case observed in Honduras and deduces the following practical points from its study:

1. The secretion of the pancreas can become suspended for some time. 2. The secretion of the glycolytic ferment is the first function re-established. 3. The re-establishment of the secretion of the steatolytic enzyme occurs last. 4. The natural secretion of steapsin and trypsin can be supplanted by the introduction of same per os and of other enzymes as papayotin. 5. Pancreon does away with the necessity of using kreatin-coated pills, pills of pancreatin, which coating is relatively unsafe, as can be demonstrated *in vitro*.

Colorado Medical Journal, Denver.

October.

51 Impressions of California Resorts. Guy Hinsdale.
52 *Clinical Observations on Congenital and Acquired Transpositions of the Viscera. James R. Arneill.

52. **Transposition of the Viscera.**—Arneill has recently had the opportunity of seeing 6 cases of this abnormality, 3 of them within six months, all of which are more or less fully described in this article, as well as 3 others reported to him. He has corresponded with various authorities to find out its frequency and learns that it is comparatively rare in the observation of pathologists. His experience, therefore, is rather singular and he also refers to the literature, especially Gruber's articles which seem to show that partial situs transversus is a much rarer condition than complete transposition.

International Medical Magazine, New York.

November.

53 *Questions and Answers Concerning Puerperal Fever.
54 *The Prophylaxis of Puerperal Septicemia. Daniel Longaker.
55 *Treatment of Puerperal Infection. James Hawley Burtenshaw.
56 Puerperal Sepsis. John Chew Applegate.
57 *The Fatty Degenerative Changes in Anemia Are an Attempt on the Part of Nature to Nourish the Patient. Jennie G. Drennan.

53. **Puerperal Fever.**—This number opens with a series of answers by obstetricians to questions on puerperal fever. To the first question, whether there are any possible circumstances in which one would not advise emptying the uterus, the answer is almost uniformly "No." Dr. Leipziger would except the case where the patient is moribund. Dr. Hirst would curette if intra-uterine douching did not control the temperature. The opinions as to the propriety of hysterectomy for suppurative metritis or widespread infection are somewhat various. Dr. Garrigues would advocate it if the general condition is fair, excepting where streptococcal infection is present. Dr. Shoemaker considers it rarely justifiable. Dr. R. C. Norris thinks that the inability to make the diagnosis is considerable and the difficulty is in doing it early enough. When the abdomen has been opened for widespread infection hysterectomy offers the best results. Palmer Dudley, Leipziger and Krusen are unfavorable in their opinions, all holding that if it is to be of service it must be performed early, before general infection, and this involves the unnecessary sacrifice of many uteri. If late, the mortality is great and the operation practically useless. Dr. Hirst would advocate the operation. Disinfection of the hands is insisted on almost universally, and as few examinations as possible. Some, like Leipziger, would use rubber gloves, as would also Krusen and Hirst. Intra-uterine douching is used by Garrigues and by Hirst when he suspects gonorrhea. Krusen considers it useless if the uterus is thoroughly contracted and no major manipulations have been required. The intravenous injection of formalin solution in the treatment of general streptococcic infection has not been observed to have had beneficial results by Shoemaker and Norris, while Leipziger, Krusen and Hirst have never tried it. Phlegmasia alba dolens is usually treated by nearly all of them by rest, elevation, ichthyol, elastic bandaging, and general attention to the health and strength.

54. **Puerperal Septicemia.**—Longaker insists on the importance of early attention to the pregnant woman, insisting on careful inspection and that the keynote in the prophylaxis of infection in labor is the "touch me not" policy. He believes in the more general use of external palpation rather than internal examinations. The nurse is a very important factor in the health of the patient and a thoroughly aseptic, clean nurse essential. All appliances must be thoroughly aseptic. He would use hot saline solution or lysol or creolin after a dry labor or an exceedingly prolonged one. The points specially deserving attention are to have the patient approach labor in good health, free from local disease, and have her surroundings clean, especially the nurse; have nothing touch her with the slightest suspicion of contamination; infrequent vaginal examinations and frequent palpation, and have nothing touch the birth canal during the early days of the puerperium—not even a sterile catheter. All the wounds occurring in the process of labor must be as carefully dealt with as less serious ones under less important circumstances.

55. **Puerperal Infection.**—Burtenshaw disbelieves in curettage of the septic uterus and has never obtained satisfactory results from uterine or vaginal tampons soaked in formalin or with alcohol, as compared with the results from iodoform gauze. In private practice he has been in the habit of introducing a suppository, containing 15 to 30 grains of iodoform, into the uterus, and packing the cavity with plain sterile gauze, repeating the procedure once or twice on succeeding days. He has never favored continuous irrigation, but he thinks it might be of benefit in putrid infection or sapremia, but not in genuine septicemia where the pathologic organisms penetrate deeply. Hysterectomy can hardly be performed early enough to be of value. A thorough evacuation of the bowels is important and the necessity of free diuresis is also apparent. In some an effective agent for this purpose is to be found in saline solutions. The use of antistreptococcic serum has been disappointing and the intravenous injection of formalin solution has met with little favor. He considers Pryor's method of opening the posterior cul-de-sac and packing the pelvic cavity with 10 per cent. iodoform gauze an excellent plan, and it is hardly necessary, he thinks, to refer to the favorable results obtained from normal salt solution injections, either hypodermically, intravenously or rectal. His experience with silver preparations has been limited. The supporting of the patient's vitality is an important factor, and attention to the diet and stimulation are necessary. The administration of drugs should be limited, but ergot, strychnin and quinin are always indicated. He thinks that an assimilable form of iodin would give good results. The patient's temperature should always be controlled by cold-water sponging and ice packs, never by drugs.

57. **Fatty Degeneration and Anemia.**—Drennan holds that fatty degeneration occurring in anemia is simply a laying-up of material for future nourishment. In the stage of fatty degeneration the anemic patient, she says, really lives on his own adipose tissue, that which is removed being replaced by more.

New York State Journal of Medicine, New York.

November.

58 The Past and Present Needs of the Medical Profession. Frederick H. Wiggin.
59 Address of President to Council and Fellows, N. Y. State Medical Association. Frederick H. Wiggin.
60 *Physiologic and Therapeutic Actions of Alcohol. Alexander Lambert.
61 *Experience in the Medical Uses of Oxygen. C. A. Greene.
62 *A Large Dose of Chloral Hydrate. Thomas J. Acker.
63 *Present Status of the Treatment of Retro-displacements of the Uterus. Harvey P. Jack.
64 Syphilis as a Contagious and Infectious Disease. William J. Meyer.
65 Some Remarks on Hemophilia, with a Report of Cases. J. C. Hutchinson.

60. **Alcohol.**—Lambert's article is largely a critical review of the report of the Committee of Fifty on the "Physiologic Aspects of the Liquor Problem," and the monograph of Rosenfeld on the influence of alcohol on the organism. He concludes that while alcohol has a decided therapeutic value, its probable field of usefulness is more restricted than generally considered. Like all of our best remedies it is a poison, and this fact should never be forgotten.

61. **Oxygen.**—Greene finds the use of oxygen exceedingly beneficial in a number of conditions. He advises its preparation by careful washing three times through a mild solution of potash and then pure water to rid it of chlorin. He has seen the most marked favorable results from the daily use of oxygen in bronchial attacks with heavy expectoration and abrasion of the mucous lining of the larger tubes. When there is an undilatable condition of the air cells or obstruction

of the larger bronchial passages, its inhalation should be used slowly, but with persistence, retaining the oxygen as long as possible The air being entirely fresh in the inhaling room, the patient should be directed to make ten full nasal respirations between each inhalation of oxygen, breathing more deeply each time, and the oxygen breathing should be made a little more firmly and decidedly until 10 to 15 full inhalations are taken. After the air vesicles can be fairly well filled eight or ten inhalations will be sufficient at one sitting. Too much inhaling may cause cerebral hyperemia and nervous excitation and might produce hemorrhage. He also insists on nasal respiration during at least two hours of the day in the open air. In the congestion from ordinary causes and more or less severe lobar pneumonia nothing is more effective than the careful, persistent use of oxygen. He also advises it in neurasthenic conditions in sedentary persons and remarks on its value in cerebral hyperemia where there is a marked inclination to arterial or venous stasis, and especially in alcoholic and drug habitués.

62. **Chloral Hydrate Poisoning.**—Acker reports 22 drams of bromidia being taken at one dose with suicidal intent by a patient with acute mania. This dose contained 330 grains of of chloral hydrate, 330 grains of potassium bromid 2¾ grains of extract of cannabis indica and 2¾ grains of extract of hyoscyamus. The treatment was the use of tincture of nux vomica, 5 drops, a teaspoonful of brandy and half a cup of hot, strong coffee and bags of hot water applied to the extremities followed by hourly 2-drop doses of tincture of nux vomica and all the coffee the patient could swallow. In two days she had apparently recovered without any bad effects; and she was subsequently sent to an asylum.

63. **Uterine Retrodisplacements.**—Jack holds that cases should be carefully studied and that many, if seen early, can be cured without an operation by hygienic measures. That in cases where operation is required, suspension of the uterus offers the best means of cure.

Vermont Medical Monthly, Burlington.

September 25.

66 Case of Retroversion with Fixation, Appendicitis and Floating Kidney; Necessitating Ventro-fixation, Removal of the Tubes and Ovaries and Fixation of the Right Kidney at One Sitting. A. Lapthorn Smith.
67 *A New Thermophilia. Dell B. Allen.
68 Atrophic Nasal Catarrh. L. R. McCready.
69 Organic Iron Medication in Secondary Anemias. Lino S. Chibas and G. A. De Santos Saxe.

67. **A New Thermophilia.**—The organism here described by Allen is an aërobic bacillus, non-motile, non-flagellated, staining with the Loeffler and Gram solutions. It was derived from renal pus. Its peculiarity is its reaction to heat. There was no appreciable growth on bouillon at 37 C., and only a slight one on agar. It did not begin to grow freely until 60 C. Its most luxuriant growth was at 75, and at 90 it dies. There was no gas formation either before or after heating, and it is non-pathologic for guinea-pigs.

Medical and Surgical Monitor, Indianapolis.

November 15.

70 *Masked Epilepsy. W. B. Fletcher.
71 *Principles in the Treatment of Chronic Otitis Media Purulenta. John F. Barnhill.
72 Therapeutic Value of Heat and Cold Applied to the Spinal Cord. W. Frank Glenn.
73 Some Recent Observations on the Action and Therapeutic Value of Currents of High Frequency and High Potential. Curran Pope.

70.—See abstract in THE JOURNAL of October 24, p. 1041.

71.—Ibid., October 31, p. 1105.

American Practitioner and News, Louisville, Ky.

October 1.

74 Fecal Impaction of the Cecum; Report of a Case. W. R. Burr.
75 The Inhumanity of Refusing the Parturient Woman the Boon of Anesthesia. I. A. Shirley.

Therapeutic Gazette, Detroit.

November 15.

76 A Brief Consideration of the Treatment of Puerperal Eclampsia. Joseph W. Irwin.
77 Medicinal Treatment of Gallstones. H. Richardson.
78 The Treatment of Angina Pectoris. William F. Waugh.
79 Treatment of Influenza with a View to the Preventive Treatment of Pneumonia. F. H. Brandt.
80 The Structures Taking Part in Menstruation. E. E. Montgomery.
81 Tubal Menstruation—A Case History. P. Brooke Bland.

Alabama Medical Journal, Birmingham.

November.

82 Report of Capital Operations During May, June, July and August at St. Vincent's Hospital. Cunningham Wilson.
83 The Diagnosis and Treatment of Ectopic Gestation, with Report of Two Cases. W. P. McAdory.
84 Tetanus, with Report of Case. Z. B. Chamblee.
85 A Case of Epithelioma Treated with the X-ray by R. L. Bowcock, M.D., Anniston, Ala. William Taylor.

Canadian Practitioner and Review, Toronto.

November.

86 *Address, University of Toronto. Charles S. Sherrington.
87 *The Master-word in Medicine. Wm. Osler.

86.—This article has appeared elsewhere. See THE JOURNAL of November 14, paragraph 107, p. 1233.

87.—Ibid., November 21, title 127, p. 1303.

Southern California Practitioner, Los Angeles.

November.

88 Cholera Infantum and Intestinal Inflammation of Infancy, with Case. E. Henderson.
89 The Method of Spread of the Contagious Respiratory Diseases. J. O. Cobb.
90 The State Examination in Medicine. L. S. Thorpe.
91 The Pathology of Eclampsia. E. L. Leonard.
92 Postpartum Eclampsia. Leon Roth.

Pennsylvania Medical Journal, Pittsburg.

November.

93 The Individual Equation of the Patient in Surgical Operations. William L. Estes.
94 *The Necessity for the More Careful Instruction of Medical Students in the Diagnosis of Preventable Diseases. Benamin Lee.
95 *Streptococci and Antistreptococcus Sera. D. H. Bergey.
96 *Some Points on Appliances for Bacteriologic Work by Busy Country Doctors. A. C. Wentz.

94.—See abstract in THE JOURNAL of October 17, p. 981.

95 and 96.—Ibid.

Western Medical Review, Lincoln.

November 16.

97 *The Operative Craze. A. S. v. Mansfelde.
98 *Precision in the Diagnosis of Surgical Lesions in the Right Half of the Abdomen. B. B. Davis.
99 Management of Typhoid Fever. A. E. Mack.
100 The Battle-field and Camping-ground. George W. Wilson.

97. **The Operative Craze.**—Von Mansfelde protests against too much surgery. He thinks the surgeon should be first of all a good physician and should follow Kocher's advice and have at least two years' experience in a general hospital and ten years' private medical practice before becoming a surgical specialist.

98. **Abdominal Surgery.**—Davis points out the difficulties of diagnosis in the region of the right half of the upper abdomen, and suggests the following questions to be asked in each case: Is the lesion found capable of producing the symptoms complained of? Does it account for all the symptoms? Does any other abdominal lesion exist, and if so, what part does it play; which is primary and which is secondary? Will the surgical cure of the disease or diseases found cure the patient, and if so, what chances are there for his surviving the operation? Will the benefit overbalance the operative risks?

Pacific Medical Journal, San Francisco.

November.

101 Postoperative Lung Complications. Winslow Anderson.
102 Case of Gunshot Wound of the Bowels. J. B. Kelly.
103 Pultaceous Angina. William F. Waugh.

Iowa Medical Journal, Des Moines.

November 15.

104 Intoxication in Appendicitis. Edward Hornibrook.

Dominion Medical Monthly, Toronto.

November.

105 *Cardiac Complications of Influenza. E. G. Wood.

105.—This article has appeared elsewhere. See THE JOURNAL of October 31, ¶4, p. 1111.

Texas Medical Journal, Austin.

November.

106 The Effect of the Higher Education of Women on Wifehood and Motherhood. J. W. Carhart.

Journal of Eye, Ear and Throat Diseases, Baltimore.
September-October.

107 Fibroma of the Conjunctiva; Lymphoma of the Pharynx; Infection of the Antrum of Highmore, with the Micrococcus Tetragenus; Three Cases of Rhinitis Fibrinosa in the Same Family. Richard H. Johnston.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.
November 21.

1 *The Diagnosis of Pulmonary Tuberculosis. C. Theodore Williams.
2 *The Treatment of Some Acute Visceral Inflammations. D. B. Lees.
3 The Mechanism of Respiration to Pneumothorax. Arthur Edmunds.
4 *Two Cases Illustrating the Fallacy of Certain Physical Signs in Diagnosing Acute Perforated Gastric Ulcer. W. Harland Peake.
5 *A Preliminary Report on the Treatment of Advanced Pulmonary Tuberculosis by Intravenous Injections of Iodoform. Thomas W. Dewar.
6 Case of Aortic Disease with Unusual Course. H. E. Bruce-Porter.
7 Case of Acromegaly. W. B. Hunter.

1. **Tuberculosis.**—This second lecture of Williams (see THE JOURNAL, April 4, 1903, p. 941) is principally devoted to the subject of cavitation of the lungs. He first describes the mechanism, which is, in the simplest form, probably due to the necrobiosis of the alveolar wall from the results of epithelial proliferation, from irritation of the tubercle bacilli, and possibly to chemical change in the cells thus produced by the germs. It is often, but not always, accompanied by fever and cough, a change in the expectoration and microscopic pieces of lung tissue are apt to be found with abundant tubercle bacilli and other organisms. The physical signs are described. When the area of softening is small the percussion sign is unchanged, but if a large cavity is formed, the dulness gives rise to limited resonance. The well-known cracked-pot sound is not an index of the size of the cavity, but indicates that it is superficial; this sound does not appear with the deeper cavities. Cough and expectoration are invariable, and yet the constitutional symptoms are not. The cavities vary not only in size and situation, but also in kind. There are the secreting cavities with smooth surfaces that look like lining membranes, but are yet exuding a great deal of matter, dry cavities with walls composed of fibroid material with little or no secretion, probably the forerunners of caseous masses composed of fibroid material, unconnected with bronchi, found in necropsies. The secreting cavities are generally found in connection with the acute forms of the disease and often extend rapidly. The dry cavity is usually the result of chronic disease and may be stationary for months or for years, causing nothing but a morning cough and expectoration. The secondary cavities are formed through the re-inhalation of secretion or sputum of primary cavities, which follow the line of certain bronchi principally where the suction power of coughing is greatest. In some patients tuberculosis is followed by so extensive an amount of excavation that the presence of air in the cavity gives rise to the phenomenon of amphoric breathing and metallic tinkling from the dropping of the fluid. The diagnosis from pneumothorax in these cases is mainly by the absence of fluid in the pleura and its characteristic signs and by the different position of the auscultation sounds. The chief signs of contraction of the cavity are the flattening of the chest wall overlying the cavity and the displacement of the neighboring organs. When the cavity is on the left side, the left lung is retracted and the right lung becomes hypertrophied and drawn across the median line. The heart is raised, its apex being tilted toward the axilla. The impulse is very slight in the chest and the stomach is drawn up. With the cavity on the right lung, corresponding symptoms occur on the other side, the left lung drawn across, the liver raised, etc. Contraction of the cavity in one lung does not prevent formation of fresh tubercle in the opposite one. It may even cause curvature of the spine. The diagnosis from bronchiectasis is based first on the age of the patient. Young adults are not so liable to the latter condition. The subjects of bronchiectasis, except when septicemic, do not show signs of wasting or anemia. Second, on appearance and examination of the sputum, which in cases of bronchiectasis is frothy, mixed with pus and more or less offensive and free from tubercle bacilli. Lastly, on the character of the cavernous sounds and their locality. Most bronchiectatic cavities are basic, while tubercle cavities are generally at the apex. The bronchiectatic cavities may, however, be detected in the first and second interspaces, where they are always nearer the median line than tubercle cavities and are never audible over such extensive surfaces of the thorax. The percussion sound is not, as a rule, dull, but resonant from the accompanying emphysema.

2. **Rheumatic Carditis and Pericarditis.**—Lees advocates the free use of the salicylates. There is only one sign that indicates danger; marked deepening of the inspiration apart from pericarditis, resembling the "air hunger" of diabetic coma. This is the only contraindication to the drug, and it should be discontinued at once. The addition of sodium bicarbonate in a quantity equal to twice that of the salicylates in each dose seems to be usually sufficient to prevent the occurrence of the symptom. The tradition that the salicylate is a cardiac depressant is discountenanced by Lees, who thinks that the heart depression is probably due to impurities in the drug and probably due still more to the disease itself. The toxin produced by the rheumatic cocci, it seems, almost certainly acts on the ventricle as does lactic acid; many earlier observers have believed that the poison of acute rheumatism is lactic acid itself. More recent observers have pointed out that the so-called *Micrococcus rheumaticus* produces formic acid in considerable quantity, and these conditions would be sufficient probably to account for the heart depression. Lees thinks that it would be better if more careful attention was paid to the condition of the heart in rheumatic cases, especially as to the size of the left ventricle in the commencing of treatment. Other methods which he mentions as of value are the application of cold, which is a powerful means of repressing cardiac inflammation and, under certain conditions, keeping the patient warm, if necessary, by hot-water bottles when an ice-bag is applied to the precordium, and keeping the warmth up during the whole period of its application, using leeches, if necessary, to prevent overdistention of the right auricle. Then the ice-bag can be used with safety in any case, however severe. Where the nursing can be thoroughly trusted an ice-bag can be used continuously for days, provided the condition of the auricle is carefully watched. He asserts that the treatment of rheumatic pericarditis by large and frequent doses of sodium salicylate and sodium bicarbonate with local application of ice over the heart is amply justified by the results, while cases inefficiently treated in the same way are likely to be slow in recovery and result in permanent crippling.

4. **Gastric Ulcer.**—Peake calls attention to two cases which indicate that certain signs are not reliable, such as the presence of shock and collapse which may be absent while regular pulse and normal temperature exist. Liver dulness and vomiting are uncertain signs, as is also pain which was present in both cases, but is sometimes apparently not observed.

5. **Tuberculosis.**—Dewar advocates the use of intravenous injections of iodoform, using it in a non-saturated ether solution. He finds that this speedily saturates the system so that even the perspiration of the palms become odorous of the drug. There is a slow sustained action which at the same time diminishes the risk of accumulative action and the patient becomes tolerant of it. It is undesirable to push the injections to the extent that the appetite is affected. The diagnostic quality of the injections is valuable. The production of fine crepitations or râles at an apex formerly dry, resonant and apparently healthy is important. Against these advantages there is the chilling effect of ether which has to be guarded against. He has noticed a breathlessness

and palpitation which he thinks may be due to iodoform. Before beginning treatment it would be well to study the available superficial venous system in the arms and legs, the more extensive this is the better the chance. While nothing is easier than to give an intravenous injection once in a large vessel, there is some difficulty in giving a hundred through a small retracted vein avoiding thrombosis and have the vessel still patent at the end of the year. Iodoform is soluble in ether in 1 to 7. He uses a not quite saturated solution, as a saturated one would evaporate too quickly and block the hypodermic syringe needle with iodoform. The solution must be introduced very slowly. He has given in some cases with very large veins as much as 45 minims at one time, but does not think such a large dose necessary. He uses the finest precipitated iodoform that can be obtained and the purest ether, specific gravity 720, making the solution fresh for each patient immediately prior to injections, exposing it to the light as little as possible. His experience is that the continuous successful injections are followed by improvement in every way except in very advanced disease where it seems to be inert in moderate doses. There is no question as to its power to arrest the disease.

The Lancet, London.

November 21.

8 The Ideal Physician: His Early Training and Future Prospects. Lambert H. Ormsby.
9 Typhoid Fever. Seymour Taylor.
10 The Dawn and Rise of Physiology. William Stirling.
11 *The Anemias of Infancy. Clive Riviere.
12 A Case of Multiple Liver Abscess. Andrew Balfour.
13 A Case of Linseed Poisoning. J. O. Hollick.
14 Unusual Case of Intestinal Obstruction. Duncan Macartney.
15 A Brief Experience in Abdominal Surgery. B. G. A. Moynihan.

11. **The Anemias of Infancy.**—Riviere sums up the conclusions of his paper as follows:

1. Anemia from any cause in infancy if severe enough gives rise to the peculiar symptoms grouped under the headings "anemia splenica infantum" and "anemia splenica pseudoleukemica" of von Jaksch.
2. Consequently, these are not specific blood diseases, but owe their peculiarities merely to the "infancy factor," and represent merely different stages of the same conditions.
3. The common cause of severe anemia in infants is gastrointestinal catarrh, leading to the absorption of toxins either from the growth of micro-organisms or possibly from the formation of poisonous by-products of digestion.
4. Leukemia of infants is not a separate disease, but merely a still more advanced stage of this anemia—that is, that the difference between them is one of degree and not of kind.
5. That leukemia of adults is a return to the condition of an infantile anemia and that, being rare, its causation is probably so narrowed down as to be practically specific.

Bulletin de l'Académie de Médecine, Paris.

16 (LXVII, No. 35.) *La syphilisation du singe. Hamonic.
17 Angine de poitrine infectieuse. J. Pawinski (Warsaw).
18 *De l'appendicite dans l'armée pendant les dernières années. Sur un point spécial de l' étiologie de cette affection. Chauvel.
19 Le surra à Hatien (Cochin-chine). Kermorgant.

16. **Syphilization of the Monkey.**—Hamonic claims priority for the transmission of syphilis from man to a baboon. In 1882 his experiments resulted in the development of what were apparently syphilitic lesions twenty-eight days after the inoculation of fluid from a chancre. His communication was referred to a committee which reported that the plaster casts of the lesions were not conclusive either for or against his assumption that they were true syphilis.

17. **Infectious Angina Pectoris.**—Pawinski claims that acute infectious diseases, especially la grippe and follicular tonsillitis, are important factors in the development of angina pectoris. He admits the predisposing influence of neuropathic conditions, excesses of various kinds, getting chilled, etc. In nearly all the cases of incipient angina pectoris under his observation the effect of the toxins of the infection on the heart innervation was unmistakably evident. When the attacks of angina pectoris persist after recovery from the infection he assumes that the inner membrane of the coronary arteries has undergone certain alterations, probably in the nature of sclerosis, which entail the true angina pectoris.

18. **Appendicitis Among Non-Meat-Eaters.**—Chauvel first mentions that the number of operations on account of appendicitis in the French army has materially and progressively increased during the last few years. He then quotes the reports of physicians in Algiers and Tunis to the effect that the affection is almost unknown there. It never occurs among the Mohammedans and only exceptionally among foreigners residing there for any length of time. He queries whether this infrequency of appendicitis may not be due to the prevailing fruit and vegetable diet and the scarcity of meat. The Arabs are particularly liable to harbor intestinal parasites, and consequently the frequency of the latter with the absence of appendicitis show that there can not be the etiologic connection between them claimed by some.

Presse Médicale, Paris.

20 (II, No. 89.) La cure définitive de l' hystérie. Rééducation. P. E. Levy.
21 L' injection de caféine comme auxiliaire de la saignée (adjuvant to venesection).
22 (No. 90.) La circulation du liquide céphalo-rachidien. F. Cathelin.
23 Traitement du ténia. L. C. Quéry.

Semaine Médicale, Paris.

24 (XXIII, No. 45.) *La Spondylite infectieuse. L. Chelnesse (Montpellier).

24. **Infectious Spondylitis—Typhoid Spine.**—See editorial in last week's issue.

Archiv f. path. Anatomie, Etc. (Virchow's), Berlin.

Last indexed page 1441.

25 (CLXXIV, No. 1.) *Experimentelle Tuberkulose. J. de Haan (Java).
26 Thyroid Gland in Smallpox. H. Roger and M. Garier (Paris).—Neue Untersuchungen über den Zustand der Schilddrüse bei den Pocken.
27 Fall von Staphylokokken-Mykosis der Haut bei Diabetes mellitus. J. B. Studenski (Kiev).
28 Hematologische Studien. E. Neumann.
29 Zur Kenntnis der direkten Kernteilung (nucleus segmentation). R. Caminiti (Naples).
30 Zur Histologie der Geflügelpocke (molluscum contagiosum in birds). H. Apolant.
31 Zur parasitären Aetiologie des Karzinoms. T. Honda.
32 Ueber multiple Amyloid-Tumoren des Kehlkopfs und der Lunge. Beitrag zu den Amyloidfarbungen. G. Herxheimer (Wiesbaden).
33 *Fat Contained in Blood and in Certain Organs in Man. T. Rumpf (Bonn).—Ueber den Fettgehalt des Blutes und einiger Organe des Menschen.
34 *Methode zur Conservierung von anatomischen Prüparaten. M. Claudius.
35 Acute, Circumscribed Inflammations of the Skin. W. Ebstein (Göttingen).—Ueber akute umschriebene Hautentzündungen auf angioneurotischer Basis.

25. **Experimental Tuberculosis in Java.**—De Haan was able to induce tuberculous infection in animals hitherto considered immune, the native goat, bullock and horse. The infection was realized by subcutaneous and intravenous injections of tubercle bacilli from human sputum. His experience further established that monkeys are extremely susceptible, and that the lesions resulting from the infection were localized almost exclusively in the lungs. Although the infection had been by way of the alimentary canal, no lesions could be discovered in the intestines, but the mesenteric glands in a few cases presented evidences of tuberculosis. One monkey who had eaten a potato serving as culture medium for tubercle bacilli, exhibited extensive tuberculous lesions in the bronchial glands. De Haan believes that tuberculosis in animals is always due to infection from man.

33. **Fat in the Blood.**—Rumpf has found that the proportion of fat in the blood varies essentially with the diet. It seems also to be higher in arteriosclerosis than in other conditions. Fatty infiltration of the liver is most pronounced in hard drinkers, in consumptives and in cancer subjects. As the liver shrivels under the influence of alcohol, the proportion of fat is reduced to normal or below.

34. **Preservation of Anatomic Specimens.**—The specimens are treated with carbonic acid and ammonium sulphate. A metal box one-third full of a concentrated solution of the latter is filled to a certain height with crystals of the salt, leaving 5 to 10 cm. of fluid above. The carbonic oxid is supplied in ordinary illuminating gas brought into the side of the box through a tube from a burner. It escapes through a glass tube, passing through a cork in the opening on top of the box. This escaping gas is lighted and burns with a steady flame as the gas bubbles up through the fluid in the box. The specimens

are placed on a grating below the surface of the fluid and left for forty-eight to seventy-two hours. The hemoglobin and other pigments in the tissues, especially the biliary pigments, remain unchanged in specimens treated by this method. They are kept afterward in a saturated solution of the ammonium sulphate through which gas has been passed. Claudius is delighted with the results attained with this technic.

Beiträge z. Geb. und Gynäkologie (Hegar's), Leipsic.

Last indexed page 1441.

36 (VIII, No. 1.) *Zur Pathologie der Eihäute (fetal membranes). K. Holzapfel (Kiel).
37 Zur Kenntnis der Ganglien der weiblichen Genitalien. S. Hashimoto (Tokio).
38 Zur normalen Anatomie der Chorion-Zotten (villi). H. Michaelis (Leyden).
39 3 Corpus-luteum-Cysten. P. Diepgen.
40 Origin and Prognosis of Obstetric Paralyses. W. Rühle.—Zur Entstehungsweise und Prognose der Entbindungslähmungen.
41 *Rupture of Uterus During Manual Detachment of Placenta. E. Oswald.—Ueber Uterus-Ruptur bei manueller Plazentalösung.
42 Vaginal Glands and Cysts. C. Widmer.—Ueber Scheidendrüsen und Scheidencysten.
43 Fall von Tuberkulose der Vulva. F. Poeverlein.
44 *Prolapse Operations. J. Klein (Strasburg).—Prolapsoperationen, insbes. die W. A. Freundsche Einnähung des Uterusfundus in die Scheide.
45 Zur Behandlung des Abortes. O. Nebesky.

36. **Pathology of Fetal Membranes.**—Among the various cases described by Holzapfel is one of the exochorial development of the fetus, that is, in the ectodermal layer of the chorion. There have been only 14 similar cases previously published and he tabulates the details of each.

41. **Rupture of Uterus During Manual Detachment of Placenta.**—Parturition had been normal in the case described by Oswald, but in extracting the placenta with her hand the nurse perforated the uterus and drew out a loop of intestine. The patient succumbed, notwithstanding prompt laparotomy. He reviews the similar occurrences in the literature and discusses their medicolegal bearing. The case described happened at the Basle Hospital for Women.

44. **Prolapse Operations.**—Freund's method of fixation of the fundus of the uterus in the vagina was followed by Klein in 10 cases. The ultimate results have been faultless in 9 and healing was rapid in all cases.

Berliner Klinische Wochenschrift, Berlin.

Last indexed page 1441.

46 (No. 43.) *Vocal Fremitus in Abdomen. W. Alexander (Berlin).—Ueber Stimmfremitus im Bauch.
47 German Southwest Africa as Resort for Consumptives. J. Katz.—Deutsch-Südwestafrika als Kuraufenthalt für Tuberkulöse.
48 Isolation of Lecithides from Snake Venom. Preston Kyes.—Ueber die Isolierung von Schlangengiftlecithiden.
49 Zur Lehre von der Anemia splenica. S. M. Zypkin (Moscow).
50 (No. 44.) Address at Inauguration of Pediatric Clinic. O. Heubner.
51 Course of Pneumonia in a Splenectomized Subject. W. v. Moraczewski (Carlsbad).—Fieberverlauf bei einem Splenektomierten.
52 *Stomach Sign in Migraine and Epilepsy. Mangelsdorf.—Ueber ein Phänomen am Magen bei Migräne und Epilepsie.
53 Die klinische Pepsin-Bestimmung nach Mette. O. Kaiserling.
54 Ueber die Natur der Isohemolysine der Menschen-Blut-Sera. C. Moreschi (Pavia). (Commenced in No. 43.)
55 Tuberculous and Non-tuberculous Affections of Respiratory Organs in Prussia Since 1875. Ascher.—Tub. und nichttub. Erkrankungen, etc.
56 (No. 45.) *Ueber ein Typhus-Diagnostikum. M. Ficker (Berlin).
57 *Inhalation of Lime Dust and Pulmonary Tuberculosis. P. Reckzeh.—Kalkstaubinhalation und Lungentub.
58 Smooth Atrophy of Root of Tongue and Its Relation to Syphilis. F. Lesser (Berlin).—Ueber die sogen. glatte Atrophie der Zungenwurzel und ihr verhältniss zur Syphilis.
59 Cranial Nerve Paralysis. C. Aronsohn.—Fall von multipler Hirnnervenlähmung mit Beteiligung des Akustikus.

46. **Vocal Fremitus in Abdomen.**—Alexander was never able to elicit the vocal fremitus in the abdomen which some writers have mentioned and cited as a sign of incipient ascites, etc.

52. **Stomach Sign in Migraine and Epilepsy.**—Mangelsdorf announces that he found the stomach much enlarged during attacks of migraine or epileptic seizures in 409 out of 469 persons examined. This enlargement gradually entails permanent atony of the organ. He thinks that it is of central origin. He found also that appropriate treatment of the atony of the stomach had a favorable influence on the attacks of migraine. The stomach enlarges regularly in all directions as the attack comes on, and subsides more or less completely to normal in the intervals.

56. **Typhoid Fever Diagnosticum.**—Ficker has coined this term to apply to a ready-made fluid with which it is possible to obtain the Widal agglutination reaction in cases of typhoid fever, without the necessity of living cultures of typhoid bacilli. The fluid keeps perfectly for nine months at least. The reaction is perceptible to the naked eye; is absolutely unmistakable, and occurs at room temperature. The practitioner is thus able to apply the agglutination test without living cultures, without an incubator and without a microscope. The results of the test are much better adapted for comparison, as the same fluid is used instead of cultures from various sources. "The fluid is derived," he says, "once from one and the same typhoid stem." Its production requires minute care and consequently Ficker has entrusted it to a manufacturing chemist who is ready to place it on the market.

57. **Therapeutic Inhalation of Lime Dust.**—Reckzeh's attempts in this line resulted negatively. He was induced to try inhalation of lime dust from observation of the remarkably low death rate from tuberculosis in certain villages in which there are numerous lime kilns. Another neighboring village in apparently the same condition, but without lime kilns, has twice as many deaths from tuberculosis. He also noticed that the disease was very rare among the workers at the kilns. He treated 8 patients with severe exacerbations of a mild pulmonary tuberculosis by suspending a linen bag filled with fine lime dust in front of the subjects as they lay in bed. Their ears were plugged with cotton and eyes bandaged, and the bag of lime dust was struck occasionally to stir up the dust. This treatment was given at first five and then ten minutes twice a day. No benefit was derived in any case, and the symptoms seemed to be aggravated.

Centralblatt f. Chirurgie, Leipsic.

Last indexed page 1236.

60 (XXX, No. 43.) *Anesthesin Hydrochlorate for Local Anesthesia. Dunbar (Deutsch-Eylau.)—Noch einiges über das salzsaure Anästhesin als örtliches Betäubungsmittel.
61 (No. 44.) *Die Behandlung der Fractura supracondylica humeri mittels der Bardenheuer'schen Extension. R. Grässner.
62 Ueber einen merkwurdigen Fall von Perforation des Preputium. R. Burmeister.
63 (No. 45.) *Zur Extirpation des Wurmfortsatzes (appendix). A. Zeller.
64 *Iodoform Bone Filling. W. Serenin (Moscow).—Einiges zur Iodoformknochenplombe nach Mosetig-Moorhof.
65 (No. 46.) Turning Back Costal Arch to Facilitate Operations. Asthoewer (Dortmund).—Die Aufklappung des Rippenbogens zur Erleichterung operativer Eingriffe im Hypochondrium und Zwerchfellkuppelraum.
66 *Prevention of Entrance of Air in Intravenous Infusions, etc. P. Herz (Magdeburg).—Vorschlag zur Verhütung von Lufteintritt bei intravenösen Infusionen usw.
67 Simple Support for Pelvis. M. Borchardt (von Bergmann's clinic, Berlin).—Eine einfache Beckenstütze.

60. **Anesthesin Hydrochlorate for Local Anesthesia.**—More than a year ago Dunbar published an account of the very successful results of local anesthesia from anesthesin injected according to the infiltration technic. His own experience since then and that of others has fully confirmed his assertions in regard to its advantages for the purpose. He uses now for operations as in mastitis, atheroma, closure of incisions, ingrowing nail, extirpation of the lachrymal sac, fissure of the lids and styes a combination of .05 gm. anesthesin hydrochlorate, and salt .2 gm. in 100 gm. distilled water. No subjective nor objective indications of irritation follow infiltration with this fluid, and the wounds heal by primary intention. In normal tissues a combination of .25 gm. anesthesin with .9 gm. salt to the 100 gm. water, causes no irritation, although it induces intense hyperemia. This proportion of salt probably has some physiologic significance. For superficial work he prefers the combination first mentioned, and for the deeper layers the proportions of .25 gm. anesthesin hydrochlorate; .15 gm. salt and 100 gm. distilled water, the latter his original solution.

61. **Extension in Treatment of Fracture of Humerus.**—Grässner states that 5 cases of supracondylar fracture of the humerus have been treated at Bardenheuer's clinic by extension. The results have been pre-eminently excellent as he

shows by radiograms before and after treatment. He also illustrates and describes the particulars of the technic.

63. **Appendicectomy.**—Zeller argues in favor of excision instead of resection of the appendix.

64. **Filling for Bone Defects.**—Serenin was favorably impressed with the advantages of this method of treating defects in the long bones, as set forth by Mosetig-Moorhof at the Madrid Congress. The technic has previously been described in these columns, xl, pp. 1303, 1545 and 1673. Serenin reports most gratifying success in 10 cases thus treated, including 3 of necrosis subsequent to osteomyelitis of jaw, tibia or humerus, and 7 of tuberculous lesions. The bone cavity heals rapidly under this technic, but asepsis and hemostasis must be complete, and every particle of tuberculous tissue must be removed. In 3 cases he tamponed the cavity for two or three days in order to ensure absolute hemostasis, before proceeding to fill it.

66. **To Prevent Entrance of Air During Intravenous Infusion.**—Herz gives a cut of a small appliance which has proved extremely useful in Habs' clinic. It is merely a glass tube with an extension on one side, shaped like a ball, opening into the tube with a wide orifice. The outline somewhat resembles that of the ordinary breast pump. The tube is interposed in the rubber tube leading from the receptacle for the fluid to the infusion needle. All the fluid thus has to pass through the glass tube. It is allowed to flow through at first with the bulb turned down, then the bulb side of the tube is turned upward, and the fluid is ready for the infusion. As it passes along the rubber tube from the receptacle into the glass tube, all the air in the fluid escapes through the broad mouth into the bulb on the glass tube, and none passes onward into the infusing needle.

Centralblatt f. Gynäkologie, Leipsic.

Last indexed page 1237.

68 (XXVII, No. 43.) *Report of Naturforscher Congress.
69 Version in Head Presentation. Gottschalk.—Zur künstlichen Drehung der Frucht besw. des Rückens bei Schädelgeburten.
70 Ein neues Instrument zur Uterustamponade (Tamponator uteri). J. J. Fedoroff (Warsaw).
71 (No. 44.) Chorioepitheliom und Ovarialtumor. J. Krebs. One Case.
72 Fall von radikaler Sectio Cesarea bei Schwangerschaft mit Cervix-Myom. Westphal.
73 Ein Instrument zur Entfernung inkarzerierter Pessarien. H. Piwniczka (Brünn).
74 (No. 45.) *Vaginal Operating Without Narcosis. V. Frommer.—Zur vaginalen Operation ohne Narkose.
75 Ueberdehnung der Wand eines graviden Uterus bilocularis. J. Jurinka.
76 (No. 46.) 2 Fälle von gleichzeitiger Extra- und Intrauterin Gravidität. E. Meyer.
77 Fall von vaginaler Sectio cesarea bei Eclampsia gravidarum. Westphal.
78 Detailed Abstracts of Articles in Chrobak *Festschrift*, 1903.

68. **Relations of Functional Nervous Diseases to the Female Genitalia.**—Two addresses were delivered on this subject at the Congress, one by Krönig of Jena and one by Eulenburg of Berlin. Each discusses the subject from the standpoints of the etiology, diagnosis and treatment, and furnishes a detailed auto-abstract, impossible to condense into a few lines. Among the other communications reviewed is one by Hahn of Vienna on the great resistance of the fetus to the diseases of the mother, Veit on tuberculosis and pregnancy, and Fellner on the influence of internal diseases on the development of pregnancy, and to what extent they forbid marriage.

74. **Vaginal Operations Without Narcosis.**—Frommer advocates vaginal operating in the presence of contraindications to general narcosis, using merely suggestion and more or less infiltration anesthesia. He injects .01 gm. morphin a half hour beforehand, and finds that this aids materially in quieting the patient. She is able to advise when the uterus wall is being pushed in with danger of perforation. During narcosis the relaxed uterus is much more easily perforated. One of his 3 patients was a woman of 69 presenting prolapse of the uterus with part of the wall of the bladder and of the rectum. The second patient, a woman of 34, was operated on for vaginal rectocele, and the third, a woman of 77, for uterine cancer. In the latter case there was so little pain that the patient moaned only twice during the hour required for the total vaginal hysterectomy. Frommer thinks that injection of a weak Schleich solution into the perineum and vulva region is all that is necessary for these vaginal operations when general narcosis is contraindicated for any cause. Gradenwitz has reported 3 cases of total vaginal extirpation of the uterus without narcosis. Asch advocates refraining from general narcosis during curettement of the uterus, and Kleinhaus has recently expatiated on the advantages of restricting narcosis in favor of infiltration anesthesia in vaginal plastic operations and simple celiotomy.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed page 1444.

79 (LXIX, Nos. 5-6.) Die Frakturen des Os naviculare carpi nach anatomischen Präparaten. R. Wolff (Berlin).
80 Lymph Routes in Appendix and Stomach. Polga and Navratil (Often-Pest).—Ueber die Lymphbahnen des Wurmfortsatzes und des Magens.
81 *Akoin in der Chirurgie. Daconto.
82 *Iodized Catgut. Claudius.—Erfahrungen über Iodkatgut.
83 *Injury of Epigastric Vessels During Puncture for Ascites. Baum (Greifswald).—Ueber eine unter ungewöhnliche Erscheinungen einhergehende Verletzung der epigastrischen Gefässe bei Aszitespunktion.
84 Fall von wahrem Nabel-Adenom. Koslowski.
85 *Ueber 175 Brucheinklemmungen (incarcerated hernias). Fuchsig and Haim (Vienna).
86 Eine seltene Fussgelenksluxation (ankle dislocation). Engelhardt.
87 *Spiral Fracture of Leg. Bayer (Cologne).—Ueber Spiralbrüche des Unterschenkels.
88 *Hemorrhage from Arrosion After Tracheotomy. Martina (Graz).—Die Arrosionsblutungen nach der Tracheotomie durch Kanulen-Dekubitus.
89 *Tardy Affections After Skull Injuries. Colley.—Ueber Späterkrankungen centralen und peripheren Ursprungs nach Schädelträumen.
90 *New Method of Diagnosing Fracture of Bones. Plesch (Ofen Pest).—Eine neue Methode zur Diagnostizierung der Knochenbrüche.

81. **Acoin in Surgery.**—Daconto recommends in place of cocain a 1 per cent. solution of acoin with .8 per cent. sodium chlorid.

82. **Iodized Catgut.**—Claudius reaffirms the superiority of catgut prepared according to his method—placed for eight days in a solution of iodin, after which it is ready for use. Just before using it is rinsed in a 3 per cent. solution of carbolic acid.

83. **Injury of Epigastric Vessels During Puncture.**—Symptoms of ileus developed after puncture for relief of ascites in the case described. A large tumor formed at the point of the puncture and an incision released a quantity of blood clots and disclosed that the epigastric artery had been injured. It was ligated and the patient recovered promptly. In similar cases on record the epigastric had bled always into the abdominal cavity.

85. **Incarcerated Hernia.**—In this report of 175 cases of incarcerated hernia it is stated that 8 out of the 14 cases of umbilical hernia terminated fatally. Out of the total 175 patients 38 had previously worn a truss which shows that a truss does not guarantee against incarceration. These experiences indicate that it is a much safer plan to bring out and keep the intestine outside the abdominal cavity when there is any question as to its vitality. Of the 35 fatal cases, 28 were due to peritonitis.

87. **Spiral Fractures.**—Bayer states that out of the 2,332 cases of fracture treated at the Cologne public hospital during the last three or four years 75 were spiral fractures below the knee. He advocates Bardenheuer's extension for all such cases and describes the technic in detail. Consolidation was complete in thirty-three days on an average.

88. **Arrosion Hemorrhage After Tracheotomy.**—Martina's 2 cases were both in women, 27 and 42 years old. The tracheotomy had been done on account of tuberculosis or carcinoma and the fatal hemorrhage occurred the eighth and twelfth day after the operation and insertion of the canula which had caused the decubitus.

89. **Tardy Affections After Skull Injuries.**—Colley's patient exhibited visual disturbances three months after an injury to the head, and two years later violent neuralgia of the right frontal nerve. The visual field was reduced to 1/12 and the right frontal nerve was much enlarged. There was also slight paresis of the internal rectus. After resection of the frontal nerve the neuralgia subsided. He is inclined to attribute the

visual disturbances to traumatic injury of the region of the fourth ventricle and corpora quadrigemina.

90. **Diagnosis of Fractures by Sound Conduction.**—Plesch diagnoses fractures in the bones by percussion and auscultation. The normal conduction of the sound stops at the point of the fracture.

Münchener Med. Wochenschrift, Munich.

91 (L. No. 44.) *Experimenteller Beitrag zur Aetiologie der Pankreas und Fettgewebs-Nekrose. O. Hess.
92 *Lacerations in Vagina and Pelvic Floor as Causes of Genital Prolapse. Schatz.—Ueber die Abreissungen der Scheide und des muskulösen Beckenbodens als Ursachen von Genitalprolaps.
93 *Treatment of Recent Laceration of Perineum. K. Hegar. (Freiburg).—Ueber die Behandlung des frischen Dammrisses.
94 *Immunization with the Ovary. K. Strobansky (St. Petersburg).—Beitrag zur Immunisierung mit Eierstock.
95 Cause of Turbidity in Milky Ascites. J. Joachim.—Ursache der Trubung in milchigen Aszitesflüssigkeiten.
96 Die Fraktur des Os schapholdeum und ihr Ausgang in Pseudarthrose. E. Pagenstecher.
97 *Sieve for Feces. F. Schilling (Leipsic).—Ein für den Praktiker geeignetes Stuhlsieb.
98 Zur Kasuistik der Myasthenia gravis pseudoparalytica. J. Hey. (Commenced in No. 43.)
99 From the Washington Congress of Physicians and Surgeons. C. Beck (New York).—Vom 5 Kongress der amerikanischen Aerzte und Wundärtze in Washington.

91. **Etiology of Pancreas Necrosis.**—Hess reports a series of experiments conducted at Marburg which demonstrated that fat injected into the pancreas through the efferent ducts caused total necrosis of the organ, with hemorrhage, fatty degeneration and rapid death, the symptom complex resembling in every particular, both clinical and in the pathologic anatomy, that of pancreas apoplexy in man. Glycerin and starch had no such effect as the olive oil and oleic acid, and paraffin induced only mechanical lesions. After discussing various theories to explain this rapidly fatal action, he suggests that the oil may possibly induce a saponification, and the symptoms be due to a soap intoxication. Münk's researches have shown that intravenous injection of .1 gm. of soap per kilogram will kill animals with symptoms of collapse, fibrillary contractions, etc.

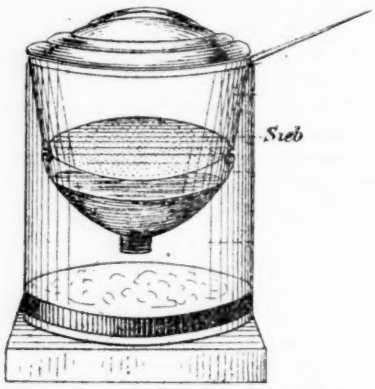
92. **Lacerations of Vagina and Pelvic Floor Cause of Prolapse.**—Schatz thinks that more attention should be paid by accoucheurs to preservation of the integrity of the vagina and muscular floor of the pelvis. The abdominal bandage favors laceration of the vagina, and the obstetrician is also frequently responsible for it, especially by early application of the forceps and extraction in breech presentation. The primipara should be preserved from breech presentation on this account. The obstetrician is too apt to devote all his attention to preserving the perineum, while this is comparatively unimportant; it has nothing to do with the integrity of the pelvic lumen, which lies on a higher plane. In order to exercise the pelvic floor, Schatz has his parturient patients after the tenth day and women with descensus sit on a chair which has a knob 5 cm. high in the seat. This knob presses the relaxed pelvic floor into place and helps the women to exercise the muscular floor of the pelvis energetically and repeatedly. The tendency of the fetal head to drag the walls of the vagina along with it is counteracted by the contractions of the uterus, which pull up the collum and vaginal walls. This tendency on the part of Nature is sometimes nullified by the "bearing down," the straining of the woman who does not allow the uterus time for its contractions, and actually forces the walls of the vagina farther and farther downward, with laceration as the inevitable result. This frequently occurs in young, healthy women, and the muscular floor above usually tears with the vaginal walls. The levator ani is particularly liable to be torn from its attachment, as it has to stand the greatest strain. Unless it can be restored to its place and fastened there, the loss of its support invites prolapse and descensus, especially after later pregnancies. It is a difficult matter to discover and remedy these lacerations in the pelvic floor and vagina. From his experience in such cases Schatz now favors prophylactic measures, and when these lacerations are imminent he makes a deep incision on the left of the vagina to preserve the perineum and then carries this incision further upward until it forms a complete paraproctal incision of the vagina to at least half its height and sometimes still higher. When incised in this way it is impossible for the vagina to tear along the side and be torn from the arcus tendineus, thus preventing laceration of the levator ani, at least from its point of attachment. It is much easier to suture this single paraproctal incision than to take care of the multiple lacerations and detachments liable witnout it. This paraproctal incision differs from Dührssen's vaginal cesarean section, as it never extends into the upper third of the vagina and involves only the soft parts of the pelvic floor. It is made on one side only and presents a clean and easily sutured wound—far preferable to the conditions liable without it. It is readily sutured with the aid of fixation forceps, which the obstetric nurse can easily manage alone. In conclusion, Schatz remarks that it is absurd to assume that any practitioner is able to handle all obstetric cases properly. Obstetrics is an art when correctly practiced, and prolapse will become less and less frequent when this is recognized and primiparæ are delivered in equipped establishments.

93. **Recent Laceration of Perineum.**—Hegar protests against the assumption that it is wise always to suture a laceration in the perineum immediately after delivery. He thinks that the suture should be undertaken at once in case the condition of the wound insures primary healing or at least renders it highly probable, if the laceration be not too extensive, not extending too far in the rectovaginal septum, and the tissues have not been crushed and there is no suggillation. The general condition of the patient must also be good and the resisting powers to be counted on. Already existing infection must be positively excluded, with no evidences of fever or discharge suggesting endometritis or colpitis. Finally, the environment must be such as to ensure all aseptic and antiseptic precautions and a favorable convalescence free from infection later. Under other conditions the suture of the tear should be postponed until after recovery. It is liable to heal spontaneously. In 53 cases in his experience treated expectantly, the lacerations of the first and second degree healed by primary intention in 33.9 per cent., with exact coaptation of the lips of the wound. In 11 cases the lips of the wound healed, but not in perfect position, and in 11 cases there was partial primary healing. In 77.3 per cent. of all the cases the functional results of the spontaneous healing were excellent. Only one of the 53 had any temperature. On the other hand, the statistics at Chrobak's clinic show some temperature in 95 out of 1,036 parturients not examined before the birth. In 45 cases in which suture was not attempted, the fever was slight in 86.6 per cent. and severe in 13.3 per cent. In 50 cases in which the laceration had been sutured the fever was severe in 38 per cent. of the cases—and this in a well-managed clinic. The proportion would certainly have been larger in private practice. Hegar cites other statistics to sustain his plea that immediate suture of the laceration in the debilitated condition of the patient affords a predisposing soil for development of germs in the secretions pent in by the suture. In his clinic parturients after delivery with a laceration have a bandage wound around the legs above the knee and are kept in the strictest dorsal decubitus for eight days. Douches and other manipulations are done with the greatest care during this interval, and entrusted only to exceptionally skilled attendants.

94. **Immunization with Ovarian Extract.**—The research described was undertaken to establish the cytotoxic power of the serum of small animals previously treated with extract of the ovary or corpus luteum. Among the points determined was that the immune serum had a favorable action on the spermatozoa of animals of the species from which the extract had been derived. In ordinary serum the spermatozoa soon lose their motility while in the immune serum they retained it for an exceptionally long time.

97. **Sieve for Feces.**—Schilling's sieve is free from the objections of most articles of the kind he states. The feces placed

in it automatically cleanse themselves and the residuum is free from odor. The apparatus is extremely simple and does not require running water, but can be set aside in a closet to do its work. Fitting into a large glass jar is a second glass vessel with a brass sieve a short distance above the bottom which tapers to a small opening below, closed with a screw cap. (See cut.) After the feces are placed on the sieve, water is poured on until it rises above the feces which thus float on the water until the latter subsides as it escapes



a drop at a time through the cap below. After six to eight hours the residuum left on the sieve can be examined without offending the eye or nose. Schilling has already made some interesting discoveries with the residuum thus conveniently obtained, and refutes the assertions of Voit and Schmidt in regard to the digestive powers of dogs.

Therapie der Gegenwart, Berlin.

Last indexed page 995.

100 (No. 9.) Treatment of Renal Lithiasis. G. Klemperer.—Behandlung der Nierensteinkrankheiten.
101 Saline Baths. F. Bahrmann and M. Kochmann.—Nimmt das Soolbad unter den Bädern ein Sonderstellung ein?
102 Zur Mechano-Therapie der Lungen-Phthise. H. Cybulski.
103 Die Anesthesirung der oberen Luftwege bei Tuberculösen. E. Pollatschek.
104 Disturbances in Bladder Innervation. A. Homburger (Frankfurt a. M.).—Ueber cerebrale und spinale Störungen der Harnblaseninnervation und die Pflege der Incontinentia.
105 (No. 10.) Salt and Fluids in Diet in Heart and Kidney Trouble. H. Strauss.—Zur Frage der Kochsalz- und Flüssigkeitszufuhr bei Herz und Nierenkrankheiten.
106 Influence of Veronal on Elimination of Nitrogen. C. Trautmann.—Einfluss des Veronal auf die Stickstoffausscheidung beim Menschen.
107 *Zur Therapie der Basedow'schen Krankheit. Kirnberger.
108 *Ueber Thiosinamin und seine Anwendung. A. Lewandowski.
109 Calorisator in Hot Air Treatment. F. Bemy (Kiel).—Die Heissluftbehandlung mit dem Voislaedter'schen Kalorisator.
110 Mineral Mud Treatment of Gonorrheal Joint Affections. Schuppenhauer (Berlin).—Gonorrhoische Gelenkerkrankungen und deren Behandlung mit lokalen Fangobehandlung.
111 (No. 11.) Die Stellung der physikalischen Heilmethoden in der heutigen Therapie. O. Vierordt.
112 Zur Frage der sogenannten febrilen Albuminurie nebst einigen Bemerkungen über die Bedeutung der Cylinder. H. Lüthje (Tübingen.)
113 *Neuere therapeutische Versuche beim Erysipel. R. Pollatschek.
114 *Treatment of Acute Nephritis with Ice. L. Stembo (Wilna).—Behandlung der akuten Nierenentzundung mit Eis.

107. **Treatment of Exophthalmic Goiter.**—Kirnberger has found that patients with exophthalmic goiter increased in weight under the administration of 10 gm. a day of sodium sulphanilic acid (sulfanilsaure Natron). He uses it on account of its being an antidote to iodin. The pulse was regulated by this drug, but the goiter and tremor were not always influenced. In one case he alternated it with rodagen. The goiter subsided and the pulse was reduced from 140 to 80. In another case this medication was kept up for two years. The mother of this patient was also a typical case of the disease.

108. **Thiosinamin.**—Lewandowski proclaims that thiosinamin is harmless and will be found particularly useful as a preliminary to operations in which adhesions are feared. Also in case of cicatricial conditions on the surface of the body or in the interior. It is liable to cure disturbances due to cicatricial contracture and is also effectual in hastening absorption of old opacities on the cornea, in cataract, iritic adhesions, choroiditis disseminata with exudation, and in deafness due to fibrous masses and cicatricial changes in the inner ear. His experience indicates that it should not be used when there might be danger from the flaring up of a subsiding process, as in recent keratitis. He injects a 15 per cent. alcoholic solution, preferably in the forearm under the skin.

113. **Erysipelas.**—Pollatschek reviews his experience with 300 cases of erysipelas, 14 fatal. He treated 33 of the patients with red light, 12 with collargol, others with mesotan, etc., but found that his mainstay was the application of icecold compresses wet with Burow's solution. The results were much better in the 80 cases thus treated than in the others. In case of much pain he supplements it with a 10 per cent. salve of anesthesin, and in extremely severe cases with intravenous injection of collargol.

114. **Treatment of Nephritis with Ice.**—Stembo has treated 20 patients with acute nephritis by application of ice bags to both kidneys, held in place with a bandage. After two or three hours he removes the ice for an hour and then replaces it, keeping up this treatment until the albuminuria has entirely vanished. This ice treatment is especially useful in sudden, acute cases of nephritis and in the acute exacerbations of a chronic affection.

Zeitschrift f. Geb. und Gynäkologie, Stuttgart.

Last indexed page 1445.

115 (XLIX, No. 2.) *Two Unusual Uterine Malignant Growths. E. Opitz (Berlin).—Zwei ungewöhnliche Uteruskarzinome, Bemerkungen zur Theorie der bösartigen Geschwülste.
116 *Ueber Endothelioma cervicis uteri. P. Kirchgessner (Würzburg).
117 Statistics of Twin Births. P. Seegert (Berlin).—Zur Zwillingsstatistik und -Diagnose.
118 *Syncytiolyse und Hemolyse. R. Scholten and J. Veit.
119 *Zur. Aetiologie der Ovarial-Adenome. M. Walthard (Berne).
120 (No. 3.) *Weitere Erfahrungen über Myom-Operationen an der Hand von 140 in den letzten 12 Jahren operierten Fällen. A. Czempin (Berlin).
121 *Das Syncytioma malignum vaginale p. p. matur. ohne Geschwülstbildung im Uterus und seine Aetiologie. G. Schmauch (Chicago).
122 Ueber Hemato-Salpinx bei Gynatresien. G. Rauscher (Leipsic).
123 Der erste Fall von Myoperithelioma uteri malignum. S. Gottschalk (Berlin). "First case."
124 Eine unbekannte Art von Adeno-Myom des Uterus mit einer kritischen Besprechung der Urnieren-Hypothese v. Recklinghausens. R. Meyer (Berlin).
125 Ueber Ovarial-Gravidität. Micholitsch (Vienna).
126 Beitrag zur Streptokokken-Infektion im Puerperio. A. Rieländer (Marburg).
128 (L, No. 1.) Zum Vergleich der vaginalen und abdominalen Operations-Methode bei Carcinoma uteri. Olshausen.
129 *Influence of Lactation on Menstruation and Conception. W. Weinberg.—Der Einfluss des Stillens auf Menstruation und Befruchtung.
130 Zum Geburts-Mechanismus. Fehling.
131 Ueber die Aetiologie der Eklampsie. Weichardt.
132 *Inherited Tendency to Multiple Births. Rosenfeld.—Zur Frage der vererblichen Anlage zu Mehrlingsgeburten.
133 *Angiom der Plazenta. Kraus.
134 *Repeated Childbirths in Same Woman with Contracted Pelvis. Henkel.—Ueber mehrfache Geburten derselben Frau mit engem Becken.
135 *Ueber solitare Hemätocelen. Alterthum.
136 *Congenital Transverse Closure of Vagina. S. M. Brickner (New York).—Unvolständiger angeb. Querverschluss der Scheide, nebst einer Theorie zur Erklärung seines Ursprungs.

115. **Two Unusual Uterine Growths.**—Opitz describes a mixed tumor, a combination of adeno-carcinoma and sarcoma, removed from a woman aged 57. The mucosa of the corpus was the starting point. All the cases on record similar to this were in women at the climacteric age. The growth was comparatively benign and the sarcoma was polypous, consisting partly of round and partly of spindle cells. He suggests the possibility that the same cause may incite the epithelium to carcinomatous proliferation and the connective tissue to sarcomatous. If this prove to be true, then carcinoma and sarcoma may be considered identical from the etiologic standpoint. In the second case described, a mucous polyp removed from the vagina proved to be carcinomatous. The pedicle of the polyp sprang from the tubal corner and an epithelioma had developed on it. He can not find in the literature another case similar to this.

116. **Endothelioma Cervicis.**—Kirchgessner adds one more to the 12 cases of endothelioma uteri on record, bringing the number of those located in the cervix up to 9. The patient

was a iii para, 34 years old. The tumor was located in the anterior portion of the cervix and the patient succumbed to peritonitis after total extirpation. Out of the total of 9 cases only 2 recovered after vaginal hysterectomy. The growth in the case described may be entitled an endothelioma lymphaticum cervicis uteri.

118. **Syncytiolysis and Hemolysis.**—The side-chain theory and the knowledge that the elements of the fetus may be deported into the maternal organism are illuminating the questions of the physiology and pathology of pregnancy. Scholten discusses them at length, laying particular stress on the significant clinical observation that in eclampsia and "pregnancy kidney" hemoglobinuria is not an infrequent occurrence. His therapeutic application of this new knowledge is proving very promising, he states, and he will publish the results soon.

119. **Etiology of Ovarian Adenomata.**—Walthard's extensive article is an important contribution to the anatomy and histology of the ovaries. It is based on systematic examination of 80 ovaries from women and girls of various ages.

120. **Myoma Operations.**—In 58 out of the total 150 cases reviewed, the myoma was removed by the vagina and in 82 by the abdominal route. The total mortality was 12 per cent. There were no fatalities in 15 conservative abdominal operations. Czempin reviews the technic followed in the different groups of cases.

121. **Syncytioma Malignum.**—Schmauch does not regard a pregnancy as indispensable to the development of a tumor of this character; it may originate from aberrant fetal cells. He does not consider the syncytium as a specific variety of cell, but believes that it is merely one phase in the cell life of the Langhans epithelium cell. The preliminary to the syncytioma is the existence of syncytial "wander cells" in the tissues. He describes a case of hemorrhage three weeks after delivery of a living child, the woman a robust iv-para. She died in the course of seven weeks notwithstanding operative measures. The necropsy revealed numerous syncytioma metastases throughout the vagina, kidneys, lungs, spleen and brain, but no primary tumor could be discovered. He consequently argues that the syncytioma belongs in the teratoma class. During the pregnancy the syncytioma checks or prevents the normal formation of syncytiolysins according to the side-chain theory. This suggests the possibility that such conditions might be combated by immunization measures if surgical intervention offers no prospects of success.

129. **Influence of Lactation on Conception.**—Weinberg states that conception occurred during the first six months after childbirth in only 12 per 1,000 of 513 non-menstruating women who were nursing their children. The proportion rose to 595 per 1,000 in 615 women who were not nursing children. The influence of lactation on conception is thus confirmed.

132. **Hereditary Tendency to Multiple Births.**—Rosenfeld's statistics are based on the family history of 216 families among the German nobility. An inherited *Anlage* to multiple births is unmistakably shown in a number of them, and also the fact that this tendency is an evidence of greater fruitfulness. An accumulation of twin births among those most closely related is the rule.

133. **Angioma of Placenta.**—Krauss describes the varieties of this growth as he has observed them in 6 cases.

134. **Repeated Childbirths in Women with Contracted Pelves.**—The prognosis of the childbirth may be established by what occurred during the last delivery, as each deformed pelvis has its own particular mechanism of childbirth. Sixty-six women with conj. diag. of 7.5 to 11 cm. had children delivered at the Berlin clinic three or more times, a total of 286 births. Henkel found it indispensable to determine the position of the skull in respect to the pelvis for each individual case. A repetition of cesarean section may be advisable and offers a good prognosis.

135. **Hepatary Hematocele.**—Alterthum reports a case and reviews the literature. The capsule of the hematocele after a tubal abortion was formed at first of fibrin, but as adhesions developed the capsule became at last a complete envelope of connective tissue.

136. **Transverse Septum in Vagina.**—Brickner does not think that this condition in unmarried women calls for treatment, but the septum should be excised as soon as a pregnancy is suspected. Intrapartum an *X*-incision is sufficient. The prognosis is bad for the child unless the septum is recognized and removed in time. The mother is likewise liable to lacerations or fatal hemorrhage on the same account. He reports 4 cases with 9 cuts.

Russkii Vratch, St. Petersburg.

Last indexed page 1445.

137 (No. 19.) *Influence of Poisons on the Gaseous Interchanges in Animals. N. P. Kravkoff.—O vliyanii yadov na gazoobmyen u zhevotnykh.
138 *Soluble Glass for Injecting Anatomic Specimens. S. N. Yashtchinski.- Zhidnoe steklo kak vpryskivaemaya massa dlya macroscopitcheskikh preparatov sosudistol systemy.
139 *O t. naz. chirurgitcheskoi scarlatinye. V. P. Gerasimovitch.
140 (No. 20.) Veins of Pancreas. V. N. Tonkoff.—O venakh podzhelodotchnoi zhelezy.
141 *Rupture of Laparotomy Wound. V. N. Orloff.—K voprosu o razryvye bryushnogo rubtza poslye tchrevosyetchenii.
142 Origin of Respiratory Rhythm. S. I. Kostin.—K voprosu o normalnago ritma dykhaniya.
143 (No. 21.) *Cryoscopy of Urine in Children. Cryoscopy in Nephritis and with Meat or Milk Diet. E. Y. Hindes.—Krioskopiya motchi u dyetei, etc.
144 Value of Methyl Atropin Bromid in Ophthalmology. V. P. Vitzinski.—O dyestvii bromistago metyl-atropina na glaz.
145 *Patologitcheskaya anatomiya neuropathitcheskago spondylosa. G. Y. Troshin. (Commenced in No. 18.)
146 Paratyphus. V. I. Byelyaeff. (Commenced in No. 20.)
147 *Changes in Kidneys After Decapsulation. B. F. Bontch-Osmolovski.—Nyekotorya danniya ob izmyenenii potchek pri ikh decapsulatzii.
148 K parazitologii i klinikye smyeshanbykh form bolotnoi likhoradki (mixed malaria). S. A. Mark.
149 K voprosu o lyetchenii bokovykh iskrivlenii nizhnikh konetchnostei (genua valga i vara) etapnymi pvyazkami Prof. J. Wolff' a. A. N. Semenoff. (Commenced in No. 20.)

137. **Influence of Poisons on Gaseous Interchanges.**—A number of tests on animals with strychnin, digitalin, etc., are described in which particular attention was paid to study of the gaseous interchanges. The results show the importance of regarding this effect of poisons in estimating their action on the organism. Also that the antagonism between certain poisons may be due to the opposite effect on the intake and consumption of oxygen, etc.

138. **Soluble Glass for Injecting Anatomic Specimens.**—Of all the materials used for injecting blood vessels, a saturated solution of potassium silicate has proved the most perfect for the purpose in this writer's experience. He adds a little prepared chalk previously tinted red or blue. This helps to solidify the mass which he prepares fresh, keeping the ingredients separate until needed.

139. **Surgical Scarlatina.**—Forty-four patients out of 2,000 operated on at the Children's Hospital, St. Petersburg, between 1897 and 1902, developed afterward the so-called surgical scarlatina. The infection coincides with the trauma of the surgical intervention. This form of scarlatina is marked by the short period of incubation, the initial fever, the rash and desquamation around the wound, complications on the part of the wound and, finally, by the absence of the specific scarlet fever sore throat. Scarlet fever is classed by the writer as a wound infection liable to complicate any operation or wound the same as erysipelas, tetanus, etc. He believes that many cases of the so-called erythem following the use of diphtheria antitoxin should probably be regarded as surgical scarlatina. The article concludes with the bibliography on the subject, after presenting in an elaborate table the details of 36 of the cases of surgical scarlatina on which the work is based. The period of incubation was less than twenty-four hours in 8 cases; less than three days in 13; less than five days in 5, and from twelve to sixty-six days in the remainder. The course of the affection is mild, and none of the three deaths in the series could possibly be attributed to it.

141. **Breaking Open of Laparotomy Wounds.**—The stress under which the wound broke open in the 26 cases reviewed was due to coughing, vomiting, excessive exertion, trauma-

tism, etc., nearly all mechanical. The list includes 2 personally observed. Orloff concludes that such a wound should be protected better than is the custom until it has solidly healed, meteorism should be prevented, and all possible sources of mechanical injury avoided.

143. **Cryoscopy of Urine in Children.**—Hindes reports his findings in a number of examinations of the urine of children both in health and in nephritis, and on a meat or milk diet. His conclusions are that this method of examination is too variable in its results when applied to the urine of children, at least, and that its findings can not be relied on with any accuracy.

145. **Neuropathic Spondylitis.**—This comprehensive communication from Bechtereff's clinic reports in detail a number of cases, concluding with a review of the literature on the subject of chronic ankylosing inflammation of the spine. Troshin distinguishes the Bechtereff type as a neuropathic curvature of the spine, while the Strümpell-Marie type is more in the nature of arthritis deformans. In the latter the changes in the spinal cord are similar to what is observed in arthritis deformans and it should be regarded consequently as a trophoneurosis. Generally speaking, all the various forms of spondylitis may be considered functional affections free from inflammatory processes. The special features of each type vary with the fundamental cause of the spondylitis.

147. **Experimental Study of Decapsulation of the Kidneys.**—The researches described failed to show any benefit from decapsulation in experimental kidney affections. There was no reformation of vessels, and merely proliferation of connective tissue and atrophy of the exposed parts.

Riforma Medica, Palermo.

150 (XIX, No. 44.) L'albargina nel trattamento delle vulvovaginiti blennoragiche delle bambine (in children). C. V. Lutati.

151 Il varicocele e sua cura chirurgica moderna, con casi clinici. S. A. Virdia. (Concluded.)

Correspondenz-Blatt f. Schweizer Aerzte, Basle.

Last indexed XL, p 1547.

152 (XXXII, No. 8.) *Ueber Albuminurie. M. Cloetta (Zurich).

153 (No. 9.) Unfavorable Criticism of Glaser's Chologen Treatment of Cholelithiasis. L. Courvoisier.—Behandlung der Cholelithiasis. (Glaser's reply in No. 12.)

154 New Diaphragm for Roentgen Technic. O. Pasche (Berne).—Neues Blenden-Verfahren in der R.-Technic.

152. **Albuminuria.**—Cloetta has been studying the three forms in which albumin may appear in the urine. The amount of serum albumin and serum globulin is far superior to that of the nucleo-albumin form and hence the latter may usually be neglected where extreme accuracy is not necessary. He designates the figure obtained by dividing the serum albumin by the globulin as the albumin quotient, and states that the acuter the nephritis, the smaller this quotient and the larger the proportion of nucleo-albumin. In chronic nephritis with induration, serum albumin predominates. He believes that the condition of the renal parenchyma determines the albumin quotient in the urine. The acuter the nephritis, the severer the lesions in the parenchyma, rendering it more permeable for the substances in the blood. The quotient in this case is nearly identical with that of the blood serum. The tougher the parenchyma becomes by indurative processes, the less permeable and the more effectually it retains the globulin. The nucleo-albumin does not seem to be derived from the blood, and is probably due to destruction of kidney cells. Whenever a chronic process undergoes an exacerbation there is renewed destruction of cells and hence increased output of the nucleo-albumin which thus acquires prognostic significance. Comparison of the albumin output with the findings of the freezing-point test shows that there is no direct connection between them. The absolute amount of albumin eliminated is not proportional to the functional disturbance in the kidney evidenced by the variations in the freezing-point. On the other hand, there seems to be a direct proportion between the amount of substances precipitated by acetic acid and the functional disturbances. In his experiments on rabbits he observed that the elimination of the albumin entirely ceased during the course of an acute nephritis, while the molecular concentration did not show any signs of decrease, but rather increased, and this combination was always followed by speedy death. In such cases we must assume that notwithstanding the tendency to anatomic healing, the kidney is not capable of rallying from its functional disturbance and the individual succumbs to the effects of the nephrogenic intoxication. This assumption that the anatomic lesions and the functional disturbances are not necessarily proportional, was confirmed by the results of administration of various drugs which have a toxic action on the kidneys. Cantharidin seemed to have less influence on the vital activity of the kidney cells than aloin, although the anatomic lesions were apparently identical. It is possible that in man cases of nephritis which seem clinically and in their pathologic anatomy to be identical may yet differ as widely as in the aloin and cantharidin experimental tests. This difference may be due, as in the latter, to the varying intensity of the functional disturbances, which in turn are dependent on the nature of the toxin causing the trouble.

New Patents.

Patents of interest to physicians, Nov. 3 to 10:

743372-3. Magnetic medical apparatus and electromagnetic therapeutic apparatus. Emile Bachelet, Tacoma, Wash.
743147. Massage instrument. Herbert A. Church, Syracuse, N. Y.
742858. Means for fumigating. Lewis W. Cock, San Marcos, Texas.
742853. Artificial leg. Chancy A. Frees, New York.
742986. Nebulizer. George W. Hopkins, Cleveland, Ohio.
743409. Apparatus for administering anesthetics. George H. Hurd, Cleveland, Ohio.
743018. Inhaler. John N. McKim, Montreal, Canada.
743306. Therapeutic appliance. George M. D. Merwin, St. Louis.
743394. Pocket cuspidor. Wm. C. Mitchell, Denver.
743310. Neck and chest protector. Stillman A. Moulton, Campbell, Cal.
743187. Hernial truss. Solomon H. Phillis, Pana, Ill.
743340. Disinfecting apparatus. Percy Simundt, Charlottenburg, near Berlin, Germany.
743127. Disinfecting apparatus. Franklyn M. Wise, New York.
743798. Siphon Filler. Henry A. Allwardt, Detroit.
743826. Expectorating pouch. Edward L. Calahan, Clifton, N. J.
743486. Surgical pad. George H. Gilmore, Murray, Neb.
743718. X-ray tube. John O. Heinze, Jr., Lowell, Mass.
743877. Catamenial appliance. Hubert A. and A. L. Ischer, Milwaukee, Wis.
743743. Hypodermic syringe. John H. McCulloch, Newville, Pa.
743741. Insufflator. Anna Mueller, Knoxville, Pa.
743562. Device for cooling or warming the human body. Bernhard Rober, Dresden, Germany.
743662. Syringe. Charles S. Rukstuhl, St. Louis.
743663. Surgical device for setting fractured legs. Johann Scheidl, Filiale Baden, near Vienna, Austria-Hungary.

Books Received.

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ATLAS OF THE EXTERNAL DISEASES OF THE EYE. By Prof. Dr. O. Haab of Zurich. Second Edition, Thoroughly Revised. Edited, with Additions, by G. E. deSchweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania. With 98 Colored Lithographic Illustrations on 48 Plates. Cloth. Pp. 232. Price, $3.00 net. Philadelphia, New York, London: W. B. Saunders & Co. 1903.

A TREATISE ON ORTHOPEDIC SURGERY. By Royal Whitman, M.D. Instructor in Orthopedic Surgery in the College of Physicians and Surgeons of Columbia University. Second Edition, Revised and Enlarged. Illustrated with 507 Engravings. Cloth. Pp. 848. Price, $5.50 net. Philadelphia and New York: Lea Brothers & Co. 1903.

QUIZ COMPENDS. COMPEND OF GYNECOLOGY. By William H. Wells, M.D., Chief of the Gynecological Staff of the Mount Sinai Hospital, Philadelphia. Third Edition, Revised and Enlarged with 145 Illustrations. Cloth. Pp. 293. Price, 80 cents net. Philadelphia: P. Blakiston's Son & Co. 1903.

A MANUAL OF BACTERIOLOGY. By Herbert U. Williams, M.D. Professor of Pathology and Bacteriology, Medical Department University of Buffalo. With 99 Illustrations. Third Edition, Revised and Enlarged. Cloth. Pp. 351. Price, $1.75 net. Philadelphia: P. Blakiston's Son & Co. 1903.

OBSTETRICS. A Text-book for the Use of Students and Practitioners. By J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University. With 8 Colored Plates and 630 Illustrations in the Text. Cloth. Pp. 845. Price, $6.00. New York and London: D. Appleton & Co. 1903.

THE NEW HAVEN COUNTY ASSOCIATION. Officers, By-laws, History of Origin, List of Members with Biographical Notes and Papers Read at the Semi-annual Meeting, Oct. 17, 1902. Paper. Pp. 135. New Haven, Conn.: Published by the Executive Committee. 1902.